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1901/02

THE LIBRARY
OF THE
UNIVERSITY OF ILLINOIS

NORTHWESTERN UNIVERSITY

COLLEGE OF LIBERAL ARTS

1901-1902

ANNOUNCEMENT OF NEW COURSES

and Changes not provided for in the Current Catalogue

In arranging registration of studies for the ensuing year, students should follow the outline of courses found in the current Catalogue, subject to the changes and modifications stated in the following pages.

New students must complete matriculation, and make settlement of entrance credits with the Board of Examiners before registration. Their registration must be in accord with the programs of studies on pages 66-68 of the current Catalogue, as modified by a paragraph appearing on the following page of this Announcement. When the registration has been approved by the Registrar, a certificate of registration and a letter to the student's adviser will be issued.

Old students should procure their registration blanks from the Registrar's clerk and immediately obtain the approval of their advisers as to the completion of registration. When the registration is thus approved, the proper certificate will be issued.

The Schedule announcing the rooms and hours of the courses of study will be duly printed. It supersedes the assignment of hours in the Catalogue. It should be carefully consulted to avoid conflicts.

MODIFIED PROGRAM OF PRESCRIBED STUDIES FOR THE DEGREE OF BACHELOR OF SCIENCE.

Second Year—

The one of the following items not already taken :

French A.	German A.	4 hours
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One item from the following not already taken :

Botany A.	} 3 or 4 hours
Chemistry A.	
Geology A.	
Mathematics B.	
Mineralogy A.	
Physics A.	
Zoölogy A.	

One item from the following :

History, at least 3 hours.	} 3 hours
English Literature A.	
Philosophy A.	
Political Economy A.	

COURSE OF STUDY IN ENGINEERING.

The following program of college studies is offered to candidates for the degree of Bachelor of Science who intend to enter the profession of Engineering. In addition to the courses required for the degree of Bachelor of Science, the program includes the fundamental engineering studies. The completion of the program will reduce the time usually spent in an engineering school to two years; or it will enable a student to enter immediately upon practical engineering work.

ESSENTIAL COURSES.

First Year—

English A.
French A.
Chemistry A.
Mathematics A.

Second Year—

German A.
Mathematics B.—1st semester.
Mathematics E.—2nd semester.
Physics A.
Mechanical Drawing (Physics G).

Third Year—

Mathematics BB.
Descriptive Geometry and
Kinematics (not definitely
announced).
Shopwork (Physics K).
English Literature I.
Political Economy A.

Fourth Year—

Mathematics J.
Applied Mechanics (Physics H).
Physics F.
Shopwork (second year, not
definitely announced).
Philosophy E.

RECOMMENDED ELECTIVES.

Geology A.	Mineralogy A.	Chemistry B.
Physics C.	Assaying.	Chemistry C.
Mathematics K.	Economic Geology.	Chemistry D.

BIOLOGY.

General Biology.

See courses announced in current Catalogue under BOTANY and ZOÖLOGY.

Major work in Biology may be either (a) Botany A, and Zoology A and C, or (b) Botany A and C, and Zoology A.

DRAWING.

Mechanical Drawing.

See Physics G.

ENGLISH LANGUAGE.

G—*Oration Writing.*

1 hour.

Hours to be arranged.

Professor CLARK and Dr. KELLOGG.

The work consists in the writing and criticism of short orations on prescribed subjects.

ENGLISH LITERATURE.

Major work : Eleven-year hours, including either A or I.

GERMAN.

F—*Goethe's Life and Works, 1749-1790.*

2 hours.

Tuesdays, Thursdays, 3.

Dr. SIMPSON.

Open to those who have had Course B.

M—*Icelandic (Old Norse).*

2 hours.

Hours to be arranged.

Dr. SIMPSON.

Kahle's *Altisländisches Elementarbuch*. Selections from the Younger and Elder Edda. Text-books: Hildebrand's *Lieder der älteren Edda*; Gering's *Glossar zu den Liedern der Edda*; Noreen's *Altnordische Grammatik*.

For advanced and graduate students; the course to be given provided that not less than three students elect the same.

GREEK.

Major work : A, B, C, D, and F. Other advanced courses may be substituted for C, D, or F.

HISTORY.

AB—*General History of Europe to 1789.*

3 hours.

Mondays, Wednesdays, Fridays, 11.

Assistant Professor WILDE.

A general preparation for the more intensive study of individual nations or of shorter periods of history. Recommended as the first elective in History.

Lectures, text-books, collateral reading, thesis.

H—*French History.*

2 hours.

Tuesdays, Thursdays, 10.

Assistant Professor WILDE.

Political and institutional history of France from Celtic occupation of Gaul to the death of Henry IV. Lectures, collateral reading, thesis.

J—*European History during the Seventeenth and Eighteenth Centuries.* 2 hours

Tuesdays, Thursdays, 9.

Dr. McCORMAC.

Begins with Thirty Years' War; especial attention to its effect upon the institutions of the Empire and of the various German states. Rise and decline of Sweden. Rise of Brandenburg-Prussia.

French History from the death of Henry IV. to 1789. The history of England for the period so far as connected with the Continent.

NOTE—Course A will be conducted by Dr. McCormac; C and G by Dr. McCormac in the first semester and Professor James in the second; F by Assistant Professor Wilde.

LAW.

C—*Diplomatic History of the United States.* 2 hours.

Tuesdays, Thursdays, 3.

Dr. McCORMAC.

Foreign relations of United States from beginning of the Revolution to our own time. Special attention to the commercial treaties following the Revolution, to annexations of territory, to relations with Spanish America, and to the Civil War period. Lectures, topics, and text-book.

PHYSICS.

F—*Primarily for Graduates.* 4 hours.

Professor CREW.

Lectures and discussions upon the subject of Heat, using Buckingham's Thermodynamics and Ewing's the Steam Engine and Other Heat Engines. The seminary plan will be followed.

G—*Mechanical Drawing.* 2 hours.

Mondays, Wednesdays, 2-5.

Associate Professor BASQUIN.

This course furnishes a good working knowledge of Mechanical Drawing as applied to machines, and is equivalent to the first year's work in drawing in engineering schools.

Text-books: Anthony's Mechanical Drawing, Anthony's Machine Design.

H—*Applied Mechanics.* 4 hours.

Tuesdays, Wednesdays, Thursdays, Fridays, 10.

Associate Professor BASQUIN.

The general application of mechanical principles to engineering problems, with particular attention to mechanics of materials, stress, strain, and flexure of columns, girders, etc. An elementary knowledge of Calculus is required.

Text-book: Church's Mechanics of Engineering.

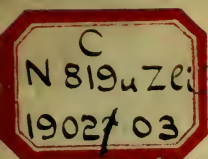
K—*Shopwork.* 2 hours.

Tuesdays, Thursdays, 2-5.

Associate Professor BASQUIN and Mr. STARKWEATHER.

Bench-work and lathe-work in both wood and metals.

Text-books: Coss's Bench Work in Wood, Golden's Wood Turning.



SERIES II

MAY, 1903

NUMBER I
THE LIBRARY

OF THE
UNIVERSITY OF ILLINOIS

BULLETIN
OF
NORTHWESTERN
UNIVERSITY

COLLEGE OF LIBERAL ARTS

CIRCULAR OF INFORMATION



EVANSTON

PUBLISHED BY THE UNIVERSITY

1903

EVANSTON AS A COLLEGE TOWN.

Evanston is the suburb of Chicago immediately adjoining the city on the north and stretching along the shore of Lake Michigan for some four miles. Richly endowed by nature, it has been made more beautiful by the care of its citizens. Its libraries, churches, and general environment offer peculiar advantages to students.

The proximity of the city to Chicago gives wide opportunity to students in libraries and other institutions of culture; yet the University is remote enough from the great city to escape many of its distractions. The spirit of the town makes for quiet and good order. The State of Illinois in the charter granted to the University prohibits the sale of intoxicating liquors within four miles of the campus.

A FEW STATISTICS FOR THE YEAR 1902-3.

The College faculty for the year consisted of forty-five members. Assistants and teaching fellows bring the total to fifty.

The total number of students registered for the year was 771, of whom 714 were undergraduates and 57 were graduates.

353 students were enrolled this year for the first time. These came from 183 different schools and were distributed in location as follows:

125 from schools in Evanston and Chicago,

95 from schools in Illinois outside of Evanston and Chicago,

133 from schools outside of Illinois.

Seventy students were received from other colleges.

At the Commencement in June, 1902, 25 students were awarded the A. B. degree, 34 the Ph. B. degree, 26 the B. S. degree, 6 that of Bachelor of Letters. 9 attained the degree of A. M., 5 that of Ph. M., 4 that of M. S., 1 that of M. L.

The total number of students in all departments of the University for the year was 2731. Not included in this number is the enrollment in the two academies and the School of Oratory under the administration of the University, which would increase the above total by 960.

REQUIREMENTS FOR ADMISSION.

The requirements for admission to the College of Liberal Arts are substantially the same as for admission to other colleges of equal rank. They comprise the following subjects, all of which must be of high school grade:

A four-year course in English Language and Literature;

Mathematics, to include Algebra through Quadratic Equations, Plane and Solid Geometry;

A year's work in a laboratory science;

A year's work in History;

Four years of foreign language (Greek, Latin, French, or German). This requirement may be met by the study of Latin for four years, or by the study of any two of these four languages for two years each.

Three other year-subjects. These may be additional credits in foreign language, Mathematics (College Algebra and Plane Trigonometry), laboratory science, History, or Economics. A year-course in Manual Training will be accepted for one unit of credit.

FEES.

The following are the fees paid by students in the College of Liberal Arts:

Matriculation Fee, paid on first entering the College, - \$5.00

Tuition Fee, due at the first of each semester, - - 35.00

(It is probable that this fee will be increased in 1904 to \$40.)

Tuition Fee for sons and daughters of ministers, and for those preparing for the ministry, - - - - 18.00

(It is probable that this fee will be increased in 1904 to \$25).

FEES (Continued).

Students pursuing a single study, i. e., taking work not exceeding five hours a week, pay each semester,	- \$18.00
Sons and daughters of ministers and those preparing for the ministry pay for one study,	- - - - 12.00
Laboratory fees are charged, in addition to above fees, as follows:	
Mineralogy, course A, second semester,	- - - 3.00
“ “ E, each “	- - - 5.00
Zoology, any course, deposit, each semester,	- - - 5.00
Chemistry, course A, deposit, “ “	- - - 7.50
“ courses B, C, or D, deposit, each semester,	- 9.00
Botany, courses A, B, and D, deposit, each semester,	2.00
“ courses C, and E, deposit, each semester,	- 3.00

STUDENTS' LIVING EXPENSES.

Women students living in Willard Hall pay, according to the desirability of the room, from \$99.00 to \$108.00 each semester. These prices include board, furnished room (usually two in a room), light, heat, and the washing of twelve plain pieces. The occupants of the rooms furnish their own bed-clothing, pillows, and towels.

(Correspondence concerning this hall should be addressed to Willard Hall, Evanston, Ill.)

In Pearsons and Chapin Halls women students pay for room and board \$55.00 each semester. The lighter work of the house is performed by the students. A deposit of \$5.00 is required when a room is reserved.

(Correspondence concerning these halls should be addressed to the Corresponding Secretary of the Woman's Educational Aid Association, Evanston, Ill.)

Men attending the University may obtain board and lodging in private families at reasonable rates. Data gathered during the past year show that the average rent paid for rooms is slightly above \$5.00 a month, and the average cost of board but little in excess of \$3.00 a week.

SCHOLARSHIPS.

The University annually tenders a scholarship to each of the high schools or academies of the State of Illinois on its accredited list. The scholarship is available for the student of the graduating class who is highest in standing and who fulfils all the requirements for admission. The scholarship covers the tuition and incidentals (but not the matriculation fee) for the first year only of the student's residence at the University.

The principal of an accredited school is authorized to tender the scholarship to the student of highest standing in the graduating class without previous consultation with the University; but should this student not wish to avail himself of it, and the principal desire another appointment to be made, he should communicate with the University, making a statement of the case.

A few scholarships in the College of Liberal Arts are awarded to students in the upper classes who are of approved scholarship and character, but these are granted only after at least a year's residence at the University and on the recommendation of the Committee on Scholarships.

SELF SUPPORT.

Every year the University receives applications for admission from young men and women who must themselves provide for the expenses of their college course. Inquiry is frequently made if the University offers opportunity for self-support. While it is impossible for the University to make such a promise, the city of Evanston is such that many students find opportunity for support in the care of furnaces, lawn-work, bookkeeping, stenography, etc., for men, and clerical work and light domestic service for women. The secretaries of the Young Men's and Young Women's Christian Associations are of much assistance in securing this employment for students, and few students who show facility and competence in the manual labor specified need leave college for financial reasons.

About one-third of the men in college are earning their own way entirely or in part.

But it is strongly urged that no student should apply for admission who has not funds adequate to the expenses of at least a half-year.

CHRISTIAN ASSOCIATIONS.

The Young Men's Christian Association and the Young Women's Christian Associations are efficient in various forms of Christian work. They conduct regular religious meetings, classes for Bible study, and foster a kindly, democratic spirit in the College. Each association has the advantage of a paid secretary giving his or her whole time to the work.

The associations assist new students to become acquainted with other students and with the University, receive applications for work from students who need to support themselves by manual labor, and perform various other functions profitable to their members and to the general student body.

STUDENT ORGANIZATIONS.

Through the agency of voluntary student associations an active interest is maintained in matters which relate to the intellectual and social life of the student community.

The Central Debating League is composed of Northwestern University, the University of Michigan, the University of Chicago, and the University of Minnesota. The purpose of this organization is the development of readiness and skill in speech and debate through the public discussion of leading questions of the day. The competition for the year 1902-3 was won by Northwestern University.

The Northern Oratorical League comprises the oratorical associations of Northwestern University, the state universities of Michigan, Iowa, Wisconsin, and Minnesota, the University of Chicago, and Oberlin College. The purpose of this organization is to promote an interest in public speaking and to elevate the standard of oratory. The competition for the year 1902-3 was won by Northwestern University.

Various literary and scientific societies meet regularly for purposes of literary culture or for the advancement of knowledge in special fields.

The University Glee Club and University Band are now under the direction of the faculty of the School of Music and receive regular instruction.

DEFECTIVE PREPARATION FOR COLLEGE.

A student may be entered for college registration if he has satisfied all the requirements for admission with the exception of one year-subject.

But this condition must be removed in the first year of residence, college courses deferring to it. Such defective work will be taken in the Academy, which is situated on the campus, and is fully equipped for preparatory instruction.

FORWARDING ENTRANCE PAPERS IN ADVANCE.

Time is saved the student if his papers for admission are sent to the Registrar as soon as they are ready for filing. Correspondence may materially assist both college and student in determining their mutual relations. Entrance papers should be full and detailed and signed by the proper school officials.

SPECIAL CIRCULARS.

The University issues special circulars as indicated below and requests for these should be addressed to the appropriate officials:

The College of Liberal Arts. The Registrar, University Hall, Evanston, Ill.

The School of Medicine. The Secretary, 2421 Dearborn Street, Chicago, Ill.

The Law School. The Secretary, Northwestern University Building, Lake and Dearborn Streets, Chicago.

The School of Pharmacy. The Secretary, Northwestern University Building, Lake and Dearborn Streets, Chicago.

The Dental School. The Secretary, Northwestern University Building, Lake and Dearborn Streets, Chicago.

The School of Music. The Secretary, Evanston, Ill.

Circular of Graduate Studies. The Registrar, University Hall, Evanston, Ill.

The women's halls. The Registrar, University Hall, Evanston, Ill.

The Academy. Principal of the Academy, Evanston, Ill.

Grand Prairie Seminary. Principal of Grand Prairie Seminary, Onarga, Ill.

Entered as second-class matter at the post-office
at Evanston, Ill.

FEES AND EXPENSES.

Matriculation Fee.—Every student, on first entering the College of Liberal Arts, is required to pay a matriculation fee of five dollars. This fee is paid but once and is not returnable.

Fees for Undergraduates.—At the beginning of each semester undergraduate students are required to pay fees for instruction and incidentals as shown in the following table. Upon payment of his semester bill a student is entitled to all the general privileges of membership in the College.

Schedule of Undergraduate Fees.

Regular full tuition and incidentals.....\$40.00 a semester.

For sons and daughters of ministers and candidates for the ministry.....	25.00	“
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For students pursuing a single study, i. e., work not exceeding five hours a week....	25.00	“
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For sons and daughters of ministers pursuing a single study.....	18.00	“
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Botanical Laboratory—

Course A	2.00	“
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Other courses	3.00	“
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Chemical Laboratory—

Course A	7.50	“
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Course B, C, or D.....	9.00	“
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Mineralogical Laboratory—

Course A (Second Semester).....	3.00	“
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Course E	5.00	“
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Zoological Laboratory—

Any course except Course E.....	5.00	“
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For two courses taken concurrently.....	7.50	“
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Under this schedule, holders of old-time perpetual scholarships will pay eighteen dollars a semester for incidentals.

The laboratory fees are intended to cover the cost of materials actually consumed and the rental of apparatus. They are in the nature of deposits, unexpended balances being returned to the student at the end of the semester.

CHRISTIAN ASSOCIATIONS.

A Young Men's Christian Association and a Young Women's Christian Association are maintained in active operation in the College, and exert a helpful influence upon the religious life of the students. The headquarters for the Men's Association are at the Association House, 2023 Orrington Avenue, and for the Woman's Association, at Willard Hall. Each Association employs a general secretary, who gives full time to the duties of the office, and each maintains a bureau of self-help for students seeking employment. Under the direction of these organizations religious meetings are held each week, and daily study of the Bible is promoted. New students are assisted in finding rooms and board, and are given counsel as to student life and activities.

DIRECTORY.

For information concerning the different departments of the University inquiries should be addressed as follows:

College of Liberal Arts—The Registrar, University Hall, Evanston, Illinois.

Medical School—The Secretary, 2431 Dearborn street, Chicago, Illinois.

Law School—The Secretary, Northwestern University Building, Lake and Dearborn streets, Chicago, Illinois.

School of Pharmacy—The Secretary, Northwestern University Building, Lake and Dearborn streets, Chicago, Illinois.

Dental School—The Secretary, Northwestern University Building, Lake and Dearborn streets, Chicago, Illinois.

School of Music—The Secretary, Music Hall, Evanston, Illinois.

The Academy—The Principal, Fisk Hall, Evanston, Illinois.

Grand Prairie Seminary—The Principal, Onarga, Illinois.

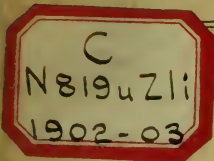
Elgin Academy—The Principal, Elgin, Illinois.

Entered as Second-Class Matter at the Post-Office at Evanston, Illinois.

SERIES I

AUGUST, 1902

NUMBER 2



BULLETIN

THE LIBRARY
OF THE
UNIVERSITY OF ILLINOIS

OF

NORTHWESTERN UNIVERSITY

COLLEGE OF LIBERAL ARTS



1902-1903

EVANSTON—CHICAGO
PUBLISHED BY THE UNIVERSITY

1902

NORTHWESTERN UNIVERSITY, EVANSTON-CHICAGO.

EDMUND J. JAMES, PH.D., LL.D., PRESIDENT.

Northwestern University consists of nine departments or schools. Four of these (Law, Medicine, Dentistry, and Pharmacy) are located in or near the center of the city of Chicago. The other four (College of Liberal Arts, Theology, Music, and the Academy) are situated in Evanston, the most beautiful suburb of Chicago, adjoining the city on the north.

The College Campus is located on the shore of Lake Michigan, about two miles north of the Chicago city limits.

For general information relating to the University as a whole, general catalogues, etc., address University Hall, Northwestern University, Evanston, Ill.

I.—THE COLLEGE OF LIBERAL ARTS, College Campus, Evanston.

Offers a four years' course leading to the Bachelor's degree, in Languages and Literature (English, French, German, Italian, Spanish, Latin, Greek, Hebrew); Mathematics (college and advanced); Science (Astronomy, Botany, Zoology, Chemistry, Physics, Mineralogy, Geology); History (ancient, mediæval, and modern); Philosophy, Psychology, Pedagogy, Economics and Politics, Sociology, and other subjects appropriate to a modern college.

Numerous graduate courses are also offered leading to the degree of A.M., and in a few subjects to that of Ph.D.

Special advantages are offered to the graduates of this college in the professional schools of the University.

For further information, address College of Liberal Arts, Evanston, Ill.

II.—MEDICAL SCHOOL, Chicago.

Offers a four years' course leading to the degree of Doctor of Medicine. The hospital and clinical facilities are especially good. This school was the first in the United States to take three important steps in medical education; the enforcement of the standard of preliminary education, adoption of longer annual courses, and the graded curriculum.

It ranks fourth in attendance among University medical schools in the United States.

For further information, address Northwestern University Medical School, 2421 Dearborn Street, Chicago.

III.—LAW SCHOOL, Chicago.

Offers a three years' course in Law, leading to the degree of Bachelor of Laws. Special facilities are provided for a thorough preparation in the practical as well as theoretical aspects of the law. The library is adequate to all the ordinary needs of the student, including over ten thousand volumes, while the proximity of the Chicago Law Institute Library provides an additional collection of nearly forty thousand, which the students are at liberty to use.

The students come from all parts of the country, and the courses are arranged with a view to giving them that knowledge of law which will be indispensable to them wherever they may practice.

For further information, address Northwestern University Law School, Northwestern University Building, cor. Lake and Dearborn Streets, Chicago.

IV.—SCHOOL OF PHARMACY, Chicago.

Offers courses leading to the degree of Graduate in Pharmacy, and to that of Pharmaceutical Chemist. The course includes instruction in general Chemistry, Chemical Analysis, Pharmacy, Botany, Microscopy, Pharmacognosy, Dispensing, and Analytical Pharmaceutical Chemistry, including Drug Assaying, Bacteriology, and Sanitary Analysis. It ranks first in attendance among University schools of Pharmacy in this country.

For further information, address Northwestern University School of Pharmacy, Northwestern University Building, cor. Lake and Dearborn Streets, Chicago.

Northwestern University

COLLEGE OF LIBERAL ARTS



EVANSTON—CHICAGO

1902-1903

ANNOUNCEMENTS FOR 1902-1903.

THE COLLEGE OF LIBERAL ARTS.

1902.

- September 22, Monday, **First Semester Begins.**
September 22 and 23, Monday and Tuesday, Examinations for Admission.
September 23, 24, 25, Tuesday, Wednesday, Thursday, Registration Days.
September 24, Wednesday, Second Examinations.
September 25, Thursday, Class-work begins, 8 A.M.
October 1, Wednesday, Cleveland Prize Contestants Announced.
October 19, 20, 21, Sunday, Monday, Tuesday, Exercises Attending the Installation of the President.
November 27, Thursday, to December 1, Monday Morning, Thanksgiving Recess.
December 22, Monday Morning, to January 6, 1903, Tuesday Morning, 8 o'clock, Christmas Recess.

1903.

- January 28, Wednesday, Founders' Day.
January 29, Thursday, Day of Prayer for Colleges.
February 4, Wednesday, to February 11, Wednesday, Regular Mid-year Examinations.
February 12, Thursday, Additional Examinations.
February 13, Friday, **Second Semester Begins.**
February 16, Monday, Second Examinations.
February 17, 18, 19, Tuesday, Wednesday, Thursday, Registration Days.
February 17, Tuesday, Class-work resumed, 8 A.M.
February 20, Friday, Cleveland Prize Contest.
February 22, Sunday, Washington's Birthday.
April 9, Thursday Evening, to April 13, Monday Evening, Easter Recess.
April 13, Monday, Second Examinations.
April 25, Saturday, Last day for the Presentation of Theses for Advanced Degrees.
May 1, Friday, Presentation of Harris Prize Theses.

May 23,	Saturday, Examination of Candidates for Advanced Degrees.
May 30,	Saturday, Memorial Day.
June 3,	Wednesday, to June 11, Thursday, Regular Examinations.
June 12,	Friday, Additional Examinations.
June 14,	Sunday, Baccalaureate Address.
June 15, and 16,	Monday and Tuesday, Examinations for Admission.
June 16,	Tuesday, Annual Meeting of the Board of Trustees.
June 16,	Tuesday, Kirk Prize Oratorical Contest.
June 17,	Wednesday, Annual Meeting of the Phi Beta Kappa Society.
June 17,	Wednesday, Meeting of the Alumni Association.
June 17,	Wednesday, Annual Address before the Phi Beta Kappa Society.
June 18,	Thursday, Forty-Fifth Commencement.
June 19,	Friday, to September 21, Monday, Summer Vacation.

THE COLLEGE OF LIBERAL ARTS.

FACULTY.

EDMUND JANES JAMES, PH.D., LL.D., *President.*

DANIEL BONBRIGHT, LL.D., *Dean of the Faculty, John Evans Professor of Latin Language and Literature.*

HERBERT FRANKLIN FISK, D.D., LL.D., *Professor of Pedagogics.*

ROBERT MCLEAN CUMNOCK, A.M., *Professor of Rhetoric and Elocution.*

ROBERT BAIRD, A.M., LL.D., *Professor of Greek Language and Literature.*

ROBERT DICKINSON SHEPPARD, A.M., D.D., *Professor of English and American History.*

ABRAM VAN EPS YOUNG, PH.B., *Professor of Chemistry.*

GEORGE WASHINGTON HOUGH, LL.D., *Professor of Astronomy and Director of Dearborn Observatory.*

JAMES TAFT HATFIELD, PH.D., *Professor of German Language and Literature.*

CHARLES BEACH ATWELL, PH.M., *Registrar, Professor of Botany.*

HENRY CREW, PH.D., *Fayerweather Professor of Physics.*

J. SCOTT CLARK, Lit.D., *Professor of the English Language.*

JOHN HENRY GRAY, PH.D., *Professor of Political Science.*

PETER CHRISTIAN LUTKIN, Mus. Doc., *Professor of Music.*

GEORGE ALBERT COE, PH.D., *Secretary, John Evans Professor of Moral and Intellectual Philosophy.*

ALJA ROBINSON CROOK, PH.D., *Professor of Mineralogy and Economic Geology.*

HENRY SEELY WHITE, PH.D., *Henry S. Noyes Professor of Pure Mathematics.*

THOMAS FRANKLIN HOLGATE, PH.D., *Professor of Applied Mathematics.*

WILLIAM CALDWELL, Sc.D., *Professor of Ethics and Social Philosophy.*

*WILLIAM ALBERT LOCY, PH.D., *Professor of Zoölogy.*

CHARLES JOSEPH LITTLE, PH.D., LL.D., *Professor of Church History.*

* On leave of absence.

GEORGE OLIVER CURME, A.M., *Professor of Germanic Philology.*

JAMES ALTON JAMES, PH.D., *Professor of the History of Continental Europe.*

EDOUARD BAILLOT, B.S., *Professor of Romance Languages.*

AMOS WILLIAM PATTEN, A.M., D.D., *Professor of Biblical Instruction.*

ULYSSES SHERMAN GRANT, PH.D., *William Deering Professor of Geology.*

JOHN ADAMS SCOTT, PH.D., *Professor of Greek Language and Literature.*

DOREMUS ALMY HAYES, PH.D., *Professor of New Testament Exegesis.*

ASHLEY HORACE THORNDIKE, PH.D., *Professor of English Literature.*

MARTHA FOOTE CROW, PH.D., *Assistant Professor of English Literature, and Dean of Women.*

OLIN HANSON BASQUIN, PH.D., *Associate Professor of Physics.*

OMERA FLOYD LONG, PH.D., *Assistant Professor of Latin.*

ARTHUR HERBERT WILDE, PH.D., *Assistant Professor of History.*

JOHN EDWARD GEORGE, PH.D., *Assistant Professor of Political Economy.*

WALTER DILL SCOTT, PH.D., *Assistant Professor of Psychology and Pedagogy, and Director of the Psychological Laboratory.*

ALBERT ERICSON, A.M., *Instructor in the Swedish Language.*

NELS EDWARD SIMONSEN, A.M., D.D., *Instructor in the Norwegian and Danish Languages.*

MARY FREEMAN, A.M., *Instructor in the Romance Languages.*

HERBERT GOVERT KEPPEL, PH.D., *Instructor in Mathematics.*

HENRY LE DAUM, A.B., *Instructor in French.*

SAMUEL DEBENHAM GLOSS, M.S., *Instructor in Chemistry.*

CHARLES MARVIN HOLLISTER, A.B., M.D.,
Instructor in Physical Culture and Director of the Gymnasium.

*EDWIN A. GREENLAW, A.M., *Instructor in Pedagogy.*

CHARLES HILL, M.S., PH.D., *Instructor in Zoölogy.*

OLIN CLAY KELLOGG, PH.D., *Instructor in the English Language.*

GEORG EDWARD, *Instructor in German.*

MARCUS SIMPSON, PH.D., *Instructor in German.*

ROBERT H. WILSON, PH.B., *Instructor in Mathematics.*

JOHN PRICE ODELL, A.B., *Instructor in English Language.*

ROBERT R. TATNALL, PH.D., *Instructor in Physics.*

WILLIAM JACOB KELLER, A.M., *Instructor in Greek.*

WILLIAM J. DAVIDSON, S.T.B., *Instructor in Hebrew.*

STANDING COMMITTEES.*

Administrative:—Professors BONBRIGHT, ATWELL, BAIRD, CROW, FISK, HOLGATE, PATTEN, YOUNG.

Undergraduate Study:—Professors YOUNG, COE, GEORGE, HATFIELD.

Board of Examiners:—Professors WHITE, BAILLOT, CURME, BAIRD, LONG, Dr. TATNALL.

Advanced Standing:—Professors LOCY, CLARK, HATFIELD.

Graduate Study:—Professors CREW, LOCY, J. A. SCOTT.

Delinquent Students:—Professors HOLGATE, LONG, WILDE.

Admission Requirements:—Professors CURME, BAIRD, HOLGATE, JAMES, W. D. SCOTT.

Registration:—The REGISTRAR, Professors BAIRD, GRANT.

Accredited Schools:—Professors JAMES, FISK, GEORGE.

Academy:—Professors FISK, CREW, CLARK.

Library:—Professors BONBRIGHT, GRAY, HATFIELD, LOCY, YOUNG.

Chapel:—Professors BAIRD, CROOK, PATTEN.

Fellowships, Scholarships, and Charitable Funds:—Professors FISK, CALDWELL, HOUGH.

Regulation of Athletic Sports (Faculty Members):—Professors LONG, WHITE, J. A. SCOTT.

Musical Organizations:—Professors HATFIELD, CROOK, LUTKIN.

Social Affairs:—Professors YOUNG, ATWELL, CROW, FISK, LUTKIN.

Catalogue:—Professor JAMES, the President, the Registrar.

CONSULTATION HOURS.

PRESIDENT JAMES, - - - - - Hours to be announced.

Professor BONBRIGHT, - - - - - Hours to be announced.

The REGISTRAR, Daily, except Saturdays, 9 to 10, Room 2, U. H.†

Professor FISK, - - - - - Daily, 11 to 12:30, Room 1, Fisk Hall.

Professor CUMNOCK, Mondays and Tuesdays, 2, Room 1, Swift Hall.

Professor BAIRD, - - - - - Mondays and Fridays, 4, Room 12, U. H.

Professor SHEPPARD, Tuesdays and Thursdays, 3, Room 9, U. H.

Professor YOUNG, - - - - - Daily, 11 to 12, Room 21, W. S. H.‡

Professor HOUGH, Tuesdays and Thursdays, 3, Room 4, E. S. H.‡

Professor HATFIELD, Mondays, Wednesdays, and Fridays, 11 to 12, Room 26, Library.

Professor ATWELL, - - - - - Daily, 10 to 11, Room 21, U. H.

Professor CREW, Daily, except Mondays and Saturdays, 11 to 12, Room 10, E. S. H.

* Names arranged alphabetically except the chairman.

† U. H. designates University Hall.

‡ W. S. H. designates the west wing of Science Hall, and E. S. H. the east wing of the same building.

- Professor CLARK, - Mondays, Wednesdays, Fridays, 9 am.;
Tuesdays and Thursdays, 4 p.m., Room 17, U. H.
- Professor GRAY, Mondays, Wednesdays, and Fridays, 9 to 9:45;
Tuesdays, 4 to 5, Room 29, Library.
- Professor LUTKIN, Mondays, Tuesdays, Wednesdays, and Thursdays,
4:30, Music Hall.
- Professor COE, Mondays, Wednesdays, and Fridays, 3 to 3:30; Tues-
days and Thursdays, to be announced, Room 5,
O. C.*
- Professor CROOK, - - - Daily, 9 to 10, Room 7, W. S. H.
- Professor WHITE, Tuesdays and Thursdays, 4, Room 4, U. H.
- Professor HOLGATE, Tuesdays and Thursdays, 9, Room 4, U. H.
- Professor CALDWELL, Mondays, 9:50, Tuesdays, 3:50, Fridays, 9:50,
Room 6, O. C.; Tuesdays, 10:45, Thursday, 11:50
and 12:20, Room 15, Library.
- Professor LOCY, Tuesdays and Thursdays, 10 to 11, Room 25, U. H.
- Professor CURME, - - - Thursdays, 9, Room 4, Library.
- Professor BAILLOT, Mondays and Wednesdays, 3 to 4, Room 13, U. H.
- Professor JAMES, Tuesdays, 10:30 to 11; Fridays, 10 to 11, Room 9, U. H.
- Professor PATTEN, Daily, except Mondays and Saturdays, 9 to 12,
Room 1, O. C.
- Professor GRANT, - - - Mondays, Wednesdays, Fridays,
11 to 11:30, Room 18, U. H.
- Professor SCOTT, - - - - Daily, 11 to 12, Room 2, Library.
- Professor THORNDIKE, - - - - Daily, 10, Room 17, U. H.
- Assistant PROFESSOR CROW, Tuesdays, 10, Room 18, Library;
Mondays, Tuesdays, Wednesdays, Thursdays Fri-
days, 2, and Saturdays 8 to 8:30 am., Willard Hall.
- Associate Professor BASQUIN, Tuesdays, Thursdays and Fridays,
11, Room 22, E. H. S.
- Assistant Professor LONG, Mondays and Fridays, 11, Room 1, Library.
- Assistant Professor GEORGE, Mondays, Wednesdays, Fridays, 10 to
10:30, Room 30, Library.
- Assistant Professor SCOTT, - - - Tuesdays and Thursdays, 11,
Room 9, O. C.
- Mr. ERICSON, - - - - Daily, 3 to 5, Swedish Seminary.
- Dr. SIMONSEN, - - - - - Daily, 10, Memorial Hall.
- Miss FREEMAN, - - - - - Daily, 9 to 10, Room 13, U. H.
- Mr. KEPPEL, - - - Monday and Wednesday, 9, Room 4, U. H.
- Mr. LE DAUM, - - - - - Daily, 3 to 4, Room 6, U. H.

*O. C. designates Old College.

REQUIREMENTS FOR ADMISSION.

Candidates for admission to the College of Liberal Arts must be at least sixteen years of age, and must present to the Registrar satisfactory evidence of good moral character, together with credentials from the last institution which they attended. Either by examination, or by certificate from an accredited school, satisfactory evidence of preparation must be given in the following subjects:

- (1) All the units described under Group A.
- (2) Four units from Group B.
- (3) Three additional units from Groups B or C.

The items in the groups indicate both the amount of work to be covered and the time to be devoted to each subject in a good secondary school, in order to secure a unit of credit.

GROUP A.

1. *English Language*—All students applying for admission to the College of Liberal Arts will be subjected to an examination in elementary English, without regard to any diplomas or certificates that they may hold. This examination will be given *in June and again in September* on the dates assigned in the calendar for entrance examination. It will cover spelling, capitalization, paragraphing, italicising, and the use of quotation-marks. Candidates will be expected to show, by an original composition on some simple subject prescribed at the time, a fair knowledge of grammatical construction and of good literary form. They will also be expected to present evidence that they have each written, before entering college, *at least eight exercises of at least three hundred words each*. Such evidence may consist of the exercises themselves, presented for inspection by the examiner, or of certificates from instructors in English in secondary schools. As to the character of the exercises required for preparation, paraphrases of standard prose or poetry are preferred; descriptions of scenes or objects actually witnessed by the writers, narrations based on personal experiences, and arguments on specific questions will be accepted; rambling expository essays on broad general themes are not acceptable. Students who cannot present evidence of such preliminary practice in compositions are required to make good the deficiency before being admitted to any college course in the English language. *Time requirement, the equivalent of four hours a week throughout one year.*

2. *English Literature*—The examination in English Literature will be conducted as follows:

I. *Reading*—A certain number of books will be set for reading. The candidate will be required to present evidence of a general knowledge of the subject-matter, and to answer simple questions on the lives of the authors. The form of examination will usually be the writing of a paragraph or two on each of several topics, to be chosen by the candidate from a considerable number—perhaps ten or fifteen—set before him in the examination paper. The treatment of these topics is designed to test the candidate's power of clear and accurate expression, and will call for only a general knowledge of the substance of the books. In place of a part or the whole of this test, the candidate may present an exercise book, properly certified to by his instructor, containing compositions or other written work done in connection with the reading of the books.

The books set for this part of the examination will be:

1902: Shakespeare's *Merchant of Venice*; Pope's *Iliad*, Books I., VI., XXII. and XXIV.; the Sir Roger de Coverley Papers in the *Spectator*; Goldsmith's *Vicar of Wakefield*; Coleridge's *Ancient Mariner*; Scott's *Ivanhoe*; Cooper's *Last of the Mohicans*; Lowell's *Vision of Sir Launfal*; George Eliot's *Silas Marner*.

1903, 1904, 1905: Shakespeare's *Merchant of Venice* and *Julius Cæsar*; the Sir Roger de Coverley Papers in the *Spectator*; Goldsmith's *Vicar of Wakefield*; Coleridge's *Ancient Mariner*; Scott's *Ivanhoe*; Carlyle's *Essay on Burns*; Tennyson's *The Princess*; Lowell's *The Vision of Sir Launfal*; George Eliot's *Silas Marner*.

II. *Study and Practice*—This part of the examination presupposes the thorough study of each of the works named below. The examination will be upon the subject-matter, form, and structure.

The books set for this part of the examination will be:

1902: Shakespeare's *Macbeth*; Milton's *L'Allegro*, *Il Penseroso*, *Comus*, and *Lycidas*; Burke's *Conciliation with America*; Macaulay's *Essays on Milton and Addison*.

1903, 1904, 1905: Shakespeare's *Macbeth*; Milton's *L'Allegro*, *Il Penseroso*, *Comus*, and *Lycidas*; Burke's *Conciliation with America*; Macaulay's *Essays on Milton and Addison*. *Time requirement, the equivalent of four hours a week throughout two years.*

3. *Mathematics*—ALGEBRA, including factoring, common divisors and multiples, fractions, simple equations of one or more unknown quantities, involution, evolution, theory of exponents, radicals and equations involving radicals, quadratic equations with one or two unknown quantities, and equations solved like quadratics. Special attention should be given to the statement of problems in the form

of equations. **GEOMETRY**, plane and solid, including the solution of a large number of exercises and numerical problems.

It is recommended that the work in Mathematics in preparation for college be extended over the whole four years of the high school course, and especially that at least two hours a week be given to this subject in the last year. A good arrangement is the following: First year, four hours a week, algebra; second year, four hours a week, plane geometry; third year, two hours a week, solid geometry; fourth year, two hours a week, algebra, reviewing and making a thorough study of quadratic equations and radicals. *Time requirement, the equivalent of five hours a week throughout two years.*

4. *History*—**ANCIENT HISTORY** with special reference to Greece and Rome, Myer's Ancient History, or an equivalent, with supplementary reading. *Time requirement, four or five hours a week throughout one year.*

NOTE 1.—If a candidate cannot present a year of Ancient History, he may substitute for it either No. 27, 28, or 29, as described under Group C, or a year of General History, Myer's, or an equivalent.

NOTE 2.—Until September, 1902, two terms, five hours a week, of Ancient or General History and one term of United States History will be accepted as satisfying this requirement.

5. *Science*—**PHYSICS**, a course equivalent to that contained in Hall and Bergen's Text-book of Physics, Carhart and Chute's Elements of Physics, or Crew's Elements of Physics. The candidate must present evidence of familiarity with the general principles of physical science, especially the simpler principles and phenomena which are constantly illustrated in daily life, such as the pendulum, hydrostatics, water waves, pitch and intensity of sound, heat conduction, boiling, freezing, simple lenses, mirrors, prisms, magnets, lines of force, voltaic cells, galvanometers, etc. It is also required that a course of laboratory work shall have been pursued in connection with the text-book, equivalent to at least forty exercises from the Harvard list, or from Crew and Tatnall's Laboratory Manual of Physics, and that accurate notes descriptive of the experiments shall have been kept. *Time requirement, five hours a week throughout one year.*

NOTE 1.—If a candidate cannot present a year of Physics, he may substitute for it either a year of Physiography (No. 22), a year of Biology (No. 23, 24, or 25,) or a year of Chemistry (No. 26).

NOTE 2.—Until September, 1902, one term, five hours a week, of Physical Geography and one term of Human Physiology and Anatomy will be accepted as satisfying this requirement.

GROUP B.

8. *Greek*—(a) **Grammar**, White's First Greek Book, or an equivalent. *Time requirement, four or five hours a week throughout one year.*

9. *Greek*—(b) Xenophon's *Anabasis*, Books I, II, and III; Jones's *Greek Prose Composition*, or an equivalent, thirty lessons. *Time requirement, four or five hours a week throughout one year.*

10. *Greek*—(c) *Anabasis*, Book IV. *Prose Composition*, lessons thirty to forty. Homer, *Iliad* or *Odyssey*, 1,800 lines. *Time requirement, four or five hours a week throughout one year.*

11. *Latin*—(a) *Grammar*; Cæsar's *Gallic War*, ten pages, or twenty pages of *Viri Romæ*, with retranslation of English into Latin. *Time requirement, five hours a week throughout one year.*

12. *Latin*—(b) Cæsar's *Gallic War*, four books completed; *Latin Composition*. *Time requirement, five hours a week throughout one year.*

13. *Latin*—(c) Cicero, six orations, including the *Manilian Law*; *Latin Composition*. *Time requirement, five hours a week throughout one year.*

14. *Latin*—(d) Vergil, six books of the *Æneid*, with test in sight reading of two additional books of the *Æneid* or the *Bucolics*. *Time requirement, five hours a week throughout one year.*

The amount of reading in Latin, as specified in the foregoing sections, indicates the extent of the work of preparation required in this subject. Equivalents may be offered for a portion of the selections designated, and evidence of thoroughness of preparation in the work actually accomplished may offset a limited measure of deficiency in amount.

NOTE.—Until September, 1902, *four* units of Latin and *two* units selected from Nos. 21, 22, 23, 24, 25, 26 of Group C will be accepted as satisfying requirements (2) and (3) on page 55.

15. *French*—(a) Correct pronunciation; elementary grammar, with exercises, including the irregular verbs; the reading of from one hundred and fifty to two hundred pages of easy French prose. *Time requirement, five hours a week throughout one year.*

16. *French*—(b) Elementary grammar completed; easy composition, based upon one of the works read; the reading of two hundred and fifty to three hundred pages of French prose. *Time requirement, five hours a week throughout one year.*

17. *French*—(c) Study of the difficulties of French syntax and idioms; translations into French from text-book and easy original compositions; the reading of not less than six hundred pages of at least five standard authors; ability to take grammatical dictations and to understand and answer questions in French. *Time requirement, four or five hours a week throughout one year.*

18. *German*—(a) Pronunciation; the memorizing and use of easy colloquial sentences; the rudiments of grammar (inflection of the articles, ordinary nouns, adjectives, pronouns, weak verbs, and the more usual strong verbs; the use of the more common prepositions;

the simpler uses of the modal auxiliaries and the elementary rules of syntax and word-order); abundant easy exercises; the reading of seventy-five to one hundred pages of graduated texts. *Time requirement, four or five hours a week throughout one year.*

19. *German*—(b) The reading of from one hundred and fifty to two hundred pages of literature in the form of easy stories and plays; translation into German of matter based upon works read; continued drill upon rudiments of grammar. *Time requirement, four or five hours a week throughout one year.*

20. *German*—(c) The reading of about four hundred pages of moderately difficult prose and poetry; retranslation into German; grammatical drill upon the less usual strong verbs; the use of articles, cases, auxiliaries, tenses and modes, word-order and word-formation. *Time requirement, four or five hours a week throughout one year.*

NOTE.—A single unit of a modern language will be accepted for entrance only on condition that the candidate shall continue the study of that language through a second year. After September, 1902, this regulation will apply also to Greek and Latin.

GROUP C.

21. *Mathematics*—ALGEBRA, including ratio and proportion, variation, progressions, permutations and combinations, binomial theorem, logarithms and their application to interest and annuities, introduction to determinants, theory of equations and series, as in Wells's College Algebra, or Hall and Knight's Elementary Algebra, or a full equivalent. PLANE TRIGONOMETRY, including the solution of oblique triangles. Consistent employment of ratio definitions of the trigonometric functions is expected, also the ability to verify numerical computations. *Time requirement, five hours a week throughout one year.*

22. *Physiography*—A study of the subjects usually given in courses in physical geography—the earth as a planet, the atmosphere, the climate, the ocean, and the land. Emphasis is to be placed upon the land, especially upon the topographic features, their origin and their significance. Some recent text-book should form the basis for the course, and the text-book should be supplemented by the study of maps, of models, and of the features of the earth's surface in the vicinity of the school. *Time requirement, four or five hours a week, throughout one year.*

23. *General Biology*—The study of typical animals and plants by laboratory methods covering the facts of morphology and physiology. This requirement may be met by a course such as that laid down in Boyer's Elementary Biology, or in Colton's Practical Zoölogy, and Atkinson's Lessons in Botany. In all cases special pro-

vision should be made for laboratory work, and accurate notes and drawings should be made by the student. Teachers in accredited schools reporting to the University should designate the quality of the laboratory work as a separate item, in addition to that of the class room work. *Time requirement, five hours a week throughout one year, including not less than one hundred and forty hours of laboratory work and two class-room periods a week.*

24. *Botany*—The study of plants as living organisms, with special regard to function, structure, and relation to environment. Each recitation or quiz period should be preceded by four hours of laboratory work. Atkinson's *Lessons in Botany* and Bergen's *Foundations of Botany* are satisfactory texts. Each pupil should individually perform the experiments and demonstrations, and should keep a neat and accurate notebook showing the work done by himself and the conclusions reached. *Time requirement, four hours a week throughout one year.*

25. *Zoölogy*—One year's study of animal structure, habits, and general life-history will be accepted as a full item of credit for entrance, provided it has been done by the laboratory method. Conditions for undertaking this work vary too widely to make it desirable to designate either an outline or text-books. Teachers competent to carry on such a course for a full year will have their own method, and the material used will also vary. Colton's *Practical Zoölogy* and Parker and Haswell's *Manual of Zoölogy* (the latter for supplementary reading) will be suggestive. Emphasis should be placed on training in observation and accuracy in drawing and expression in the notebooks. To meet the requirements in this course there should be not less than 150 hours of laboratory work, besides two class-room periods a week throughout the year.

26. *Chemistry*—This course should occupy not less than four periods a week through a year, which should allow at least eight hours of the student's time for the subject. Laboratory work should be made an essential feature of the study, and this may well take one-half the total time assignment. Careful and systematic notes of his individual work should be made by the student. Some work in quantitative experiments is recommended as extremely desirable both for training and in order to illustrate the fundamental laws. Purely descriptive work may better be limited to comparatively few elements and compounds rather than extended to a larger list with resulting confusion to the student.

27. *Mediæval and Modern European History*—Myers' *Mediæval and Modern History*, or an equivalent, with supplementary reading. *Time requirement, four or five hours a week throughout one year.*

28. *English History*—A study of the political and constitutional

development of England. *Time requirement, four or five hours a week throughout one year.*

29. *American History and Civil Government*—Channing's Students' History of the United States, or an equivalent. James and Sanford's Civil Government, or an equivalent. *Time requirement, four or five hours a week throughout one year.*

NOTE.—Candidates are recommended to offer one of the units of History as described above, as it is believed that better educational results are obtained by devoting a full year to one of these periods. But until further notice a unit of credit will be given for a year's work devoted to any two of these divisions, or a unit of credit will be given for a year devoted to General History.

30. *Political Economy*—Macvane's Political Economy, or its equivalent. *Time requirement, four or five hours a week throughout one year.*

GROUP D.

Instead of a full year's work in one science, the equivalent of four terms' work, each of five hours a week, from the subjects in this group will be accepted, until further notice, for one unit of credit under Group C; but students are strongly advised to make choice of one subject and pursue it through the year.

31. *Botany*—A practical knowledge of the general facts of plant life, such a course as is outlined in Atkinson's Lessons in Botany.

32. *Zoology*—A study of various animal types founded upon laboratory work such as that prescribed in Part I, Boyer's Elementary Biology.

33. *Physics*—Elements of Physics, Crew's, first four chapters, or an equivalent.

34. *Astronomy*—Young's Elements.

35. *Geology*—Dana's Revised Text-book of Geology, or Tarr's Elementary Geology, or an equivalent.

36. *Chemistry*—Remsen's Elementary Course, or an equivalent. It is urgently recommended that laboratory work by the student accompany this study.

37. *Drawing*—Elements of Free-Hand and Geometrical Drawing; such a knowledge of the subject as may be gained by practice under instruction two hours a week through one year.

38. *Human Physiology*—Martin's Human Body, briefer course, or an equivalent.

39. *Physical Geography*—Some recent text-book.

40. *History of England*—Montgomery's, or an equivalent.

41. *Civil Government*—James and Sanford's, or an equivalent.

In special cases, where candidates are unable to meet the requirements relating to specific subjects but can present the full equivalent of the *total* requirement for admission, they may by vote of the Faculty or the Board of Examiners be admitted as regular students; but this regulation will not release a candidate for a degree from any of the specified studies required for that degree, as described on pages 69 and 70.

EXAMINATION FOR ADMISSION.

The regular days of examination for admission to the College of Liberal Arts are the Monday and Tuesday next preceding Commencement, and the Monday and Tuesday next preceding the opening of the college year. The first regular examination for the year 1902 will be held on June 16 and 17; the second will be held on September 22 and 23. Candidates may be examined and admitted at other times, if prepared to enter classes at an advanced point in the regular courses, they are advised, however, to enter at the beginning of a year.

On the dates above named, examinations will be held in the following order in Room 10, University Hall.

PLAN FOR ENTRANCE EXAMINATIONS, 1902.

MONDAY, JUNE 16 AND SEPT. 22.

- 8 A.M., Subjects 8, 9, 10, 15, 16, 17, 32, 41.
- 10 A.M., Subjects 11, 12, 21, 34, 35.
- 2 P.M., Subject 4.
- 3 P.M., Subjects 5, 38, 39.
- 4 P.M., Subjects 22, 33, 36.

TUESDAY, JUNE 17 AND SEPT. 23.

- 8 A.M., Subject 3.
- 10 A.M., Subjects 18, 19, 29, 30.
- 11 A.M., Subjects 13, 14, 20, 23, 26, 28, 31, 40.
- 2 P.M., Subject 1.
- 3 P.M., Subject 2.
- 4 P.M., Subjects 24, 25, 27.

CERTIFICATES.

A candidate for admission, whether coming from an accredited school or not, must present to the Board of Exam-

inners a certificate from the principal of the last school attended, and a letter of recommendation. This certificate must show the studies pursued in the school, the time spent in each, the text-book or manual used, the extent of work covered, the grade of the student's work, and the date (approximate) of the final examination. Blank forms for this certificate will be furnished on application to the Registrar. The certificates should be placed in the hands of the Registrar one week prior to the date fixed for examination.

ADMISSION FROM ACCREDITED SCHOOLS.

Students who come from an accredited academy or high school may be admitted on certificate without examination (except in the English Language), provided they present themselves for admission not later than a year and three months after graduation from their school. In case the preparation of a student admitted on certificate is found, in the first semester, to be unsatisfactory, he will be required to complete his preparation in a fitting-school or in such other way as his instructors may designate.

ACCREDITED SCHOOLS.

School-boards desiring to have their schools placed on the accredited list should make application to the President of the University, who will provide, if practicable, for a proper inspection by committee. The following information will be expected in the letter of application:

- a.* The names of all the teachers, with a statement both of their preparation for teaching and of their experience in that work.
- b.* The latest printed catalogue or annual report of the school, containing an outline of the course of study and text-books used.
- c.* A careful statement of the methods pursued in teaching Mathematics, Language, and the Sciences.
- d.* The amount and kind of scientific apparatus and the extent of library facilities accessible to students.

The committee of inspection will ordinarily consist of one or more members of the Faculty, but in cases where the school is so distant from the seat of the University as to make this

impracticable, other persons may be appointed to perform the work of inspection under the direction of the Faculty.

The schools which are approved by the Faculty after inspection will be placed on the accredited list, and the relation thus established will continue for three years, unless the Faculty within this period becomes satisfied that such changes have occurred as make further inspection desirable.

The following schools are now on the accredited list:

<i>School.</i>	<i>Principal or Superintendent.</i>
Aurora, East Side High School,	W. F. Geiger.
Aurora, West Side High School,	Katharine Reynolds.
Beloit, Wis., Beloit College Academy,	A. W. Burr.
Beloit, Wis., High School,	F. E. Converse.
Belvidere, North Side High School,	Arthur J. Snyder.
Belvidere, South Side High School,	Montgomery Moore.
Bloomington, High School,	E. L. Boyer.
Blue Island, High School,	J. E. Lemon.
Bushnell, High School,	W. H. H. Miller.
Canton, High School,	Charles Aldrich.
Centralia, High School,	J. L. Hughes.
Charleston, High School,	W. Wallis.
Chicago, Austin High,	Geo. H. Rockwood.
Calumet High,	Avon S. Hall.
Englewood High,	James E. Armstrong.
English High & Manual Training,	Albert R. Robinson.
Hyde Park High,	Charles W. French.
Jefferson High,	Charles A. Cook.
Lake High,	Edward F. Stearns.
Lake View High,	B. F. Buck.
Marshall High,	Louis J. Block.
Medill High,	E. C. Rosseter.
North Division High,	Oliver S. Wescott.
Northwest Division High,	Franklin P. Fisk.
South Chicago High,	Charles I. Parker.
South Division High,	Spencer R. Smith.
West Division High,	George M. Clayberg.
Chicago, University School,	E. C. Coulter.
Cleveland, O., East High School,	B. U. Rannells.
Clinton, Ia., High School,	J. S. McCowan.
Clinton, Wis., High School,	R. E. Loveland.
Clyde, Township High School,	H. V. Church.
Council Bluffs, Ia., High School,	F. C. Ensign.

*School.**Principal or Superintendent.*

Crown Point, Ind., High School,	Mattie B. Matheny.
Danville, High School,	B. A. Sweet.
Davenport, Ia., High School,	
Decatur, High School,	S. W. Ehrman.
Denver, Colo., High School, Dis. No. 1,	Wm. H. Smiley.
Des Moines, Ia., North High School,	W. E. D. Rummel.
Des Moines, Ia., West High School,	W. A. Crusinberry.
Dixon, High School,	Charles W. Groves.
Dubuque, Ia., High School,	J. T. Gochenauer.
Evanston, Township High School,	Henry L. Boltwood.
Evanston, University Academy,	Herbert F. Fisk.
Elgin, Academy,	George N. Sleight.
Elgin, High School,	Earl J. Kelsey.
Epworth, Ia., Epworth Seminary,	H. R. DeBra.
Fond du Lac, Wis., High School,	Elizabeth Waters.
Freeport, High School,	Sigel E. Raines.
Galena, High School,	J. W. Cupples.
Geneseo, Public High School,	H. H. Frost.
Harvey, Thornton Township High School,	J. E. Cable.
Havana, High School,	J. R. Sparks.
Highland Park, Deerfield Township High School,	
Indianapolis, Ind., Shortridge High School,	W. A. Wilson.
Jacksonville, High School,	George W. Hufford.
Joliet, Township High School,	Hugh S. Weston.
Kankakee, High School,	J. Stanley Brown.
Kansas City, Mo., Central High School,	I. E. Neff.
Keokuk, Ia., High School,	I. I. Cammack.
Kewanee, High School,	A. A. Reed.
Kidder, Mo., Kidder Institute,	T. M. Birney.
LaCrosse, Wis., High School,	George W. Shaw.
Lake Geneva, Wis., High School,	W. R. Hemmenway.
Lanark, High School,	John N. Foster.
LaSalle, Township High School,	C. O. DuBois.
Lincoln, High School,	Charles A. Farnam.
Mattoon, High School,	B. E. Nelson.
Marengo, High School,	Will A. Marlow.
Maryville, Mo., Maryville Seminary,	G. N. Snapp.
Mendota, West Side High School,	Charles O. Mills.
Milwaukee, Wis., Milwaukee Academy,	C. G. Griswold.
Milwaukee, Wis., East Division High School,	J. Howard Pratt, Jr.
	Arthur Burch.

<i>School.</i>	<i>Principal or Superintendent.</i>
Milwaukee, South Division High School,	Edward Rissman.
Milwaukee, West Division High School,	Charles E. McLenegan.
Minneapolis, Minn., Central High School,	John N. Greer.
Moline, High School,	J. H. Heil.
Mt. Carroll, High School,	Lillian H. Deming.
Muscatine, Ia., High School,	E. F. Schall.
Oak Park, Township High School,	John C. Hanna.
Odell, High School,	L. T. Earnheart.
Onarga, Grand Prairie Seminary,	Frank G. Barnes.
Oregon, High School,	E. S. Hady.
Ottawa, Township High School,	J. O. Leslie.
Peoria, High School,	A. W. Beasley.
Plano, High School,	J. R. Freebern.
Plattsmouth, Neb., High School,	John G. McHugh.
Polo, High School,	S. Manson Abbott.
Pontiac, Township High School,	J. Edward Bangs.
Princeton, Township High School,	D. O. Barto.
Quincy, High School,	David B. Rawlins.
Racine, Wis., High School,	E. W. Blackhurst.
Riverside, High School,	Edward L. Hardy.
Rockford, High School,	B. D. Parker.
Rock Island, High School,	J. F. Darby.
Rossville, High School,	I. A. Smothers.
St. Paul, Minn., Cleveland High School,	S. A. Farnsworth.
Sandwich, High School,	W. W. Woodbury.
Sioux City, Ia., High School,	George E. Marshall.
Sioux Falls, S. D., High School,	H. L. Wilson.
Sparta, Wis., High School,	F. E. Doty.
Springfield, City High School,	L. M. Castle.
Sterling, Township High School,	O. L. Miller.
Streator, Township High School,	S. B. Hursh.
Tuscola, High School,	W. D. Higdon.
Warren, Warren Academy,	H. B. Humphrey.
Warren, Pa., High School,	W. L. MacGowan.
Waukegan, High School,	Webster J. Stebbins.
Wheaton, High School,	Ella M. Gregg.
Whitewater, Wis., High School,	W. W. Martin.
Wichita, Kas., City High School,	B. F. Dunkin.
Wilmette, New Trier Township High School,	Frank L. Smart.
Winona, Minn., High School,	Wm. A. Bartlett.

Schools in California, Indiana, Iowa, Kansas, Michigan, Minnesota, Nebraska, Ohio, and Wisconsin, that are on the accredited list of the State Universities of their respective states will be recognized as if accredited by this University.

SPECIAL STUDENTS.

On recommendation of a committee of the Faculty, persons of serious purpose and mature years may be admitted as special students to pursue selected studies. The work taken will be under the supervision and control of the committee. Applications for admission as special students must be accompanied by evidence of sufficient qualification to carry on the proposed work to advantage. Blank forms of application may be obtained of the Registrar.

ADMISSION TO ADVANCED STANDING.

Candidates for advanced standing are not admitted later than September of the collegiate year in which they expect to graduate. Students from other colleges must present evidence of honorable dismissal, and must give satisfactory proof of preparation for the courses which they desire to enter. They should bring official certificates showing their grade of credits for the subjects which they have pursued, also the number of weeks and the number of hours per week the respective studies were taken.

ADMISSION OF WOMEN.

Women are admitted to the College of Liberal Arts on substantially the same conditions as men. Unless special exemption from the rule is granted, they room in one of the Halls provided for them. Willard Hall is under the oversight of the Dean of Women, who lives in the building, and associates with the residents as a friend and adviser. Pearsons Hall and Chapin Hall are in charge of an association of ladies, incorporated as the Woman's Educational Aid Association, who consider the claims of all applicants for admission, and have a friendly supervision over them while inmates of these halls. The ordinary work of Pearsons and Chapin Halls

is done by the young women under the direction of a competent Matron. In this way the expenses of living are materially reduced.

All women students, wherever they reside, are expected to conform to the general regulations prescribed for the conduct of those living in the Halls.

NOTE.—For further information respecting Willard Hall, letters of inquiry should be addressed to Dean of Women, Willard Hall, Evanston, Ill.; and for information respecting Pearsons or Chapin Hall, letters should be addressed to Mrs. J. A. Pearsons, President of the Woman's Educational Aid Association, Evanston, Ill.

FACULTY ADVISERS.

Every undergraduate student on entering college is assigned to some member of the Faculty, who is to act as his adviser and give him helpful counsel relating to his college life. He is required to submit his choice of studies to his adviser and obtain approval of the same before completing his registration for college work. As soon as the student makes choice of the department in which he is to do his major work, the professor at the head of that department becomes his adviser. The time and place at which the adviser may be consulted are announced on the official bulletin-board at the beginning of the academic year.

PROGRAMS OF STUDY.

NOTE.—The annual courses designated by capital letters are hereinafter described. The time assignment is in hours a week for a year.

As a condition of graduation, the student is required to complete 120 semester-hours, including courses prescribed for the degree sought and major work in at least one department. In addition to prescribed studies, elective work to make a total of fifteen hours a week is required. Four years will usually be necessary for the satisfactory accomplishment of the work for graduation.

Prescribed courses take precedence of elective courses, and in the order designated in the programs. Modifications of these programs, permitted because of substitutions allowed in entrance requirements, may be made at the time of registration, but the full amount of required work must be

completed before graduation. Having begun an elective course the student is expected to continue it through the year.

The programs of prescribed year-courses leading to the several degrees, also the hours a week assigned to each, and the years in which they should generally be taken, are given below.

FOR THE DEGREE OF BACHELOR OF ARTS.

<i>First Year.</i> —English Language A,	-	-	three hours.
Greek A,	-	-	four hours.
Latin A,	-	-	four hours.
Mathematics, A or AB,	-		four or five hours.

Second Year.—French AA or German AB, - five or four hours.

Two of the following three items:

- | | | | |
|-------------------------|---|---|--------------|
| (1) Greek B, | - | - | three hours. |
| (2) Latin B, | - | - | three hours. |
| (3) Mathematics B or C, | - | | three hours. |

Third or Fourth Year.—

English Literature A,	-	-	two hours.
Philosophy E,	-	-	one hour.

NOTE.—For those who enter without Greek, courses AA and AB in Greek become prescribed work, to be completed before taking Greek A. The equivalent of Latin (a), (b), (c) and (d), is required for admission to Latin A.

FOR THE DEGREE OF BACHELOR OF PHILOSOPHY.

<i>First Year.</i> —English Language A,	-	-	three hours.
French A or German A,	-		four hours.
Greek A or Latin A,	-	-	four hours.
Mathematics A or AB,	-		four or five hours.

Second Year.—Two items of the following three:

- | | | | |
|---------------------------|---|--|--------------|
| (1) French B or German B, | - | | three hours. |
| (2) Greek B or Latin B, | - | | three hours. |
| (3) Mathematics B or C, | - | | three hours. |

The one of the following courses
not already taken:

French AA, German AB,	-		five or four hours.
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Third or Fourth Year.—

English Literature A,	-	-	two hours.
Philosophy E,	-	-	one hour.

NOTE.—For those who enter without Greek and desire to elect Greek in the options above indicated, the courses AA and AB in Greek (p. 90) become prescribed work, to be completed before taking Greek A. The equivalent of Latin (a), (b), (c) and (d), (p. 58) is required for admission to Latin A. The equivalent of French AA is required for admission to French A, and of German AB for admission to German A.

FOR THE DEGREE OF BACHELOR OF SCIENCE.

First Year.—English Language A, - - three hours.
 French A or German A, - - four hours.
 Chemistry A, or Physics A, or
 Zoölogy A, - - - four hours.
 Mathematics A, or AB, - - four hours.

Second Year.—The one of the two following items not already taken:

French A, German A, - - four hours.

One item from the seven following not already taken:

Botany A, Chemistry A, Geology A, Mathematics B, BB or C, Mineralogy A, Physics A, Zoölogy A, - - - three or four hours.

One item of the four following:

English Literature, History, Philosophy A, Political Economy A, - - - three hours.

Third or Fourth Year.—

English Literature A, - - two hours.

Philosophy E, - - one hour.

NOTE.—The completion of courses AA and A, in French, or their equivalent; and of courses AB and A, in German, or their equivalent, either before or after admission to college, is a requirement for this degree, except that French A or German A may be omitted if preparation for admission has included Latin (a), (b), and (c), or Greek (a), (b), and (c). One science of the first group and another of the second group are required.

FOR THE DEGREE OF BACHELOR OF LETTERS.

This degree will not be given after June, 1904.

First Year.—English Language A, - - three hours.
 French A, - - - four hours.
 German A, - - - four hours.
 Mathematics A or AB, - - four or five hours.

Second Year.—English Language B, - - two hours.
 English Literature A, - - three hours.
 English Literature B or C, - - two hours.
 French B, - - - three hours.
 German B, - - - three hours.

Third or Fourth Year.—

Philosophy E, - - one hour.

NOTE.—The completion of courses AA, and A, and B, or their equivalent, in French, and of courses AB, and A, and B, or their equivalent, in German, either in preparation or in college, is a requirement for this degree.

MODIFIED PROGRAM.

FOR THE DEGREE OF BACHELOR OF ARTS.

First Year.—English Language A, - - - three hours.
 Greek A, - - - four hours.
 Latin A, - - - four hours.
 Mathematics, A or AB, - - - four or five hours.

Second Year.—Greek B or Latin B, - - - three hours.

Second Year or Later.—

English Literature A, - - - two hours.
 Philosophy E, - - - one hour.

Electives.—In addition to the required items, sufficient elective work must be taken to make a total of one hundred and twenty semester-hours. In the electives must be included at least one item of Group I (below), and at least one item of Group II. The elective work must also include at least one *minor* in some department other than foreign language. The minors consist of at least two year-courses, and will be specifically defined under the several departments. At least one *major* as defined under the several departments must also be included. This may or may not be in the same department as the *minor*.

GROUP I.

English Literature,
 History—3 year-hours,
 Philosophy A,
 Political Economy A,
 Moral and Social Philosophy A,

GROUP II.

Botany A,
 Chemistry A,
 Geology A,
 Mineralogy A,
 Physics A,
 Zoölogy A.

FOR THE DEGREE OF BACHELOR OF PHILOSOPHY.

First Year.—English Language A, - - - three hours.
 Greek A or Latin A, - - - four hours.
 French A or German A, - - - four hours.
 Mathematics, A or AB, - - - four or five hours.

Second Year.—Greek B, or Latin B, or French B,
 or German B, - - - three hours.

Second Year or Later.—

English Literature A, - - - two hours.
 Philosophy E, - - - one hour.

Electives.—The specifications as to total, *minor*, and *major* are the same as in the AB. program.

FOR THE DEGREE OF BACHELOR OF SCIENCE.

First Year.—English Language A, - - three hours.
 French A or German A, - four hours.
 Chemistry A, or Physics A, or
 Zoölogy A, - - four hours.
 Mathematics, A or AB, - four or five hours.

Second Year.—The one of the two following items not already taken:
 French A, or German A, - four hours.
 One item of the seven following not already taken:
 Botany A, Chemistry A, Geology A, Mathematics B, BB, or C, Mineralogy A, Physics A, Zoölogy A, - - three or four hours.
 One item of the four following:
 English Literature, History, Philosophy A, Political Economy A, - - three hours.

Third or Fourth Year.—

English Literature A, - - two hours,
 Philosophy E, - - one hour.

Electives.—In addition to the required items, sufficient elective work must be taken to make a total of one hundred and twenty semester-hours. The elective work must include at least one *minor* in some department other than foreign language. The *minors* consist of at least two year-courses and are to be specifically defined under the several departments.

At least one *major* as defined under the several departments must also be included. This may or may not be in the same department as the *minor*.

COURSES OF INSTRUCTION.

The courses of instruction are subject to change from year to year. Those to be given during the year 1902–1903 are described below.

The amount of credit towards graduation assigned to each course is expressed by the terms *one hour*, *two hours*, etc., *an*

hour of credit being given for the satisfactory completion of work equivalent to one exercise a week during one semester.

The Faculty reserves the right to withdraw, at the beginning of a semester, the offer of any study not chosen by at least five persons.

ASTRONOMY AND METEOROLOGY.

A—*Astronomy; Meteorology.* 2 hours.

Tuesdays, Thursdays, 2.

Professor HOUGH.

First Semester.—General Astronomy.

Second Semester.—General Astronomy completed and Meteorology.

THE BIBLE.

A—*Introduction to the English Bible.* 2 hours.

Wednesdays, Fridays, 2.

Professor PATTEN.

First Semester.—How the Bible came to be. The evolution of the English Bible. The English of the Bible. The Bible and English literature.

Second Semester.—The Bible as literature. The relation of Hebrew life to Hebrew literature.

Lectures and required readings, with papers on the various topics considered.

Text used: The American Standard Revised Version.
Moulton's Modern Readers' Bible.

B—*The Gospel of John.* 2 hours.

Tuesdays, Thursdays, 2.

Professor PATTEN.

First Semester.—John's Gospel in relation to the Synoptics.

Second Semester.—Christian Evidences from the standpoint of the character of Christ as developed in the Gospels.

Text: Cambridge Bible for Schools and Colleges.

Rowe's Manual of the Christian Evidences.

Nash's Ethics and Revelation.

C—*Biblical History*. 2 hours.

Wednesdays, Fridays, 3.

Professor PATTEN.

First Semester.—The World of the Patriarchs. History of the Hebrews from the Conquest to the Exile.

Second Semester.—History of the Jews, from the Exile to the Christian Era.

Lectures, required readings, and text. Kent's Historical series.

Open to students who have completed thirty hours.

D—*Acts of the Apostles and the Epistles*. 3 hours.

Tuesdays, Wednesdays, Thursdays, 4.

Professor PATTEN.

First Semester.—The Acts of the Apostles. An inductive study of the era of Apostolic Christianity, noting the life and institutions of the primitive church.

Second Semester.—Selected Pauline Epistles.

Text: Cambridge Bible for Schools and Colleges, with lectures and required readings.

E—*History of Religion*. 2 hours.

Tuesdays, Thursdays, 3.

Professor PATTEN.

First Semester.—An inquiry into the origin of religion, with a survey of the principle religions of the world in their rise and development.

Text, with required readings and papers. Menzies' History of Religion.

Second Semester.—The History and Development of Christian Missions.

The main text in this course will be Warneck's History of Protestant Missions which will be accompanied with lectures and required readings in selected mission history and literature.

Major work: Ten year-hours.

BIOLOGY.

General Biology.

See courses announced under BOTANY and ZOÖLOGY.

. *Major work in Biology may be either (a) Botany A, and Zoölogy A and C, or (b) Botany A and C, and Zoölogy A.*

BOTANY.

- A—*Biology of Plants.* 4 hours
Mondays, Fridays, 2-4; Tuesdays, Thursdays, 2.

Professor ATWELL and Miss TAYLER.

The course covers the biology, morphology and life-cycles of typical plants selected from the more important natural groups. Ecology and classification receive special attention during the month of May. Laboratory and field work, with quizzes and informal lectures. Atkinson's Elementary Botany.

This course was given as a three-hour course in 1901-2.

- B—*Ferns, Mosses, Fungi, Algæ.* 3 hours.
Tuesdays, Thursdays, 2-4; Wednesdays, 2.

Professor ATWELL.

Comparative morphology of ferns, mosses, fungi and algæ. Laboratory work, lectures, and field work. No text-book. Books of reference are provided. Should be preceded by Course A, or an equivalent. May be taken with Course C.

- C—*Physiology and Histology of Plants.* 2 to 5 hours.
Hours to be arranged in forenoons of Mondays, Wednesdays, Fridays.

Professor ATWELL and Miss TAYLER.

The course is experimental, and should be preceded by one course in botany or general biology. Course A in Chemistry is also very desirable. Detmer and Moor, Plant Physiology, Chamberlain's Manual of Plant Histology.

Courses A, B and C constitute a good preparation for teaching botany in secondary schools.

- D—*Botanical Club.* 1 hour.
Wednesdays, 4.

Professor ATWELL.

Instructors and advanced students report upon and discuss important articles in current botanical literature.

- E—*Special Problems in Plant Life.* 2 to 5 hours.
Hours to be arranged.

Professor ATWELL.

For advanced students special work will be laid out along lines of investigation of the life-history, morphology, and physiology of plants.

Major work: Ten year-hours.

CHEMISTRY.

A—*General Chemistry.* 4 hours.

Section I. Tuesdays, Wednesdays, Thursdays, 1:30-4.

Section II. Mondays, Fridays, 1:30-4.

Tuesdays, Thursdays, 1:30-2:30.

Professor YOUNG and Mr. GLOSS.

Lectures and laboratory work, which includes in the last of the course the introduction to Qualitative Analysis.

B—*Qualitative Analysis continued, and Organic Chemistry.*

4 hours.

Mondays, Fridays, 1:30-4; Wednesdays, 1:30-4:30.

Professor YOUNG.

Lectures, text, and laboratory work; the Organic Chemistry begins in January after the recess.

Course B open to those who have completed A.

C—*Quantitative Analysis: First Semester, Gravimetric; Second Semester, Volumetric.*

4 hours.

Tuesdays, Thursdays, 1:30-4:30; Wednesdays, 10-12.

Professor YOUNG and Mr. GLOSS.

Course C open to those who have completed A.

D—*Problems in the Application of Qualitative and Quantitative Analysis.*

2 hours.

Tuesdays, Thursdays, 10-12.

Professor YOUNG and Mr. GLOSS.

First Semester.—Examination of water, mainly from the sanitary standpoint.

Second Semester.—Examination of milk, butter, and other fats and oils.

Course D is open to those who have completed A, B, and C.

E—*Advanced Course.*

2 hours.

Professor YOUNG.

Students in D and others are offered an additional course of reading on somewhat advanced topics. The work has been based on Oswald's Outlines of General Chemistry.

Major work: A, B, and C.

ELOCUTION.

A—*First Course.*

2 hours.

Section I. Mondays, Wednesdays, 4.

Section II. Tuesdays, Thursdays, 4.

Professor CUMNOCK.

Russell's Manual of Elocution and Cumnock's Choice Readings are used. Instruction is given in the management and regulation of the breath; the proper use of the body in the development of vocal energy; the most advanced knowledge of English Phonation; the most approved methods of acquiring distinct articulation; the function of the natural and orotund voices; the application of force, stress, pitch, rate, quantity, and emphasis, and their importance in the dynamics of expressive speech; the use of inflection for the purpose of emphasis and melodious effect; the fundamental principles of gesture and their application. Specific instruction will be given as to how exhaustion of the body in speaking may be prevented; how sore throat, occasioned by an over-use or wrong use of the vocal organs, may be avoided; how harsh quality of voice may be removed, and pure musical quality acquired; how mannerisms in melody and inflectional forms may be remedied; how awkwardness in gesture may be conquered; what is the best time for vocal practice, and how it should be regulated.

B—*Study of Masterpieces of English Eloquence.*

2 hours.

Section I. Tuesdays, Thursdays, 8.

Section II. Wednesdays, Fridays, 8.

Professor CUMNOCK.

The chief object in Course B is to establish the student in the best literary and elocutionary form, by bringing him in contact with the most perfect models. In the second semester of this course the English of Shakespeare will be studied with the help of Abbott's Shakespearean Grammar.

- C—*Principles of Vocal Expression.* 2 hours.
Mondays, Fridays, 9.

Professor CUMNOCK.

Course C is designed especially for the year of graduation. Great stress will be laid upon the acquisition of perfect form in common reading and oratorical address. The written productions required each semester will be carefully examined, and whenever needed, the class instruction in English style will be supplemented by personal advice and criticism.

- D—*Bible, Hymn, and Liturgic Reading.* 2 hours.
Mondays, Fridays, 11.

Professor CUMNOCK.

As a result of the work in Course D, it is expected that the student will have the skill to read, with melodious effect and expressive power, the Bible, hymn book, and liturgy.

ENGINEERING. See PHYSICS.

THE ENGLISH LANGUAGE.

- A—*Rhetoric; Synonyms. Eight Essays.* 3 hours.

- Section I. Mondays, Wednesdays, Fridays, 8.
- Section II. Mondays, Wednesdays, Fridays, 9.
- Section III. Mondays, Wednesdays, Fridays, 10.
- Section IV. Mondays, Wednesdays, Fridays, 11.
- Section V. Mondays, Wednesdays, Fridays, 2.
- Section VI. Mondays, Wednesdays, Fridays, 3.
- Section VII. Mondays, Wednesdays, Fridays, 8.

Professor CLARK, Dr. KELLOGG, and Mr. ODELL.

First Semester.—A practical drill in the avoidance of the common violations of good style.

Second Semester.—Rhetorical imagery and synonyms.

Required of all students in regular courses.

- B—*Prose Masterpieces; Paragraphing.* 2 hours.

- Section I. Tuesdays, Thursdays, 9.
- Section II. Tuesdays, Thursdays, 10.

Professor CLARK.

First Semester.—A study of the diction and the distinctive characteristics of twenty-four great writers of prose.

Second Semester.—Paragraphing. The study of masterpieces continues till about April 1. Each member of the class in paragraphing writes two themes each week.

Open to all who have had Course A.

- C—*Versification; Poetic Masterpieces.* 2 hours.
 Wednesdays, Fridays, 9.

Professor CLARK.

First Semester.—A study of the mechanics of English versification.

Second Semester.—A study of the diction and the distinctive characteristics of twenty great poets. This work begins about November 1, during the first semester.

Open to all who have completed Course A.

- D—*History of the English Language; Anglo-Saxon; Early English.* 2 hours.
 Tuesdays, Thursdays, 3.

Professor CLARK.

After spending about three weeks in reviewing the history of the English language, the class takes up briefly the outlines of Anglo-Saxon grammar. The larger part of the college year is then devoted to the reading of selections from fifteen pre-Chaucerian authors, from Bæda to Gower, inclusive.

Open to all students who have completed Course A and at least one course in German.

- E—*Forensics.* 2 hours.
 Hours to be arranged.

Professor CLARK.

Open to all who have completed Course A. The class meets in small sections, and each member debates once a week on questions previously assigned. Reading references are given and briefs required.

- F—*Editorial Writing.* 2 hours.
 Wednesdays, Fridays, 10.

Professor CLARK.

Every member of the class writes two short articles each week during the college year.

Open to all who have had Courses A and B.

- G—*Biblical English.* 3 hours.
 A course in the diction, imagery, and idiom of the English Bible. For graduates only.
 Hours to be arranged.

Professor CLARK.

Major work: Courses A, B, C, either D or E, and F.

Greek F (a course in Greek literature in English) may be substituted for course D or course E as a part of the major

work in the English language by students who have not studied Greek.

ENGLISH LITERATURE.

A—*The History of English Literature.* 2 hours.

Section I. Mondays, Wednesdays, or Fridays, 9.

Section II. Tuesdays, Thursdays, or Fridays, 9.

Professor THORNDIKE.

This course is intended to supply the student with the general outline and important facts of the history of literature and to serve as an introduction to the other courses in the department. Lectures, recitations, and a considerable amount of reading.

Required of all students in regular courses. Students are recommended to take the course as early as sophomore year, if possible.

B—*The History of American Literature.* 2 hours.

Tuesdays, Thursdays, 8.

Professor THORNDIKE.

First Semester.—American Literature from 1607 to 1837.

Second Semester.—American Literature from 1837 to 1900.

C—*Chaucer.* 2 hours.

Professor THORNDIKE.

A careful study of a large body of Chaucer's poetry.

Omitted in 1902-3.

D—*Shakespeare and the Elizabethan Drama.* 3 hours.

Mondays, Wednesdays, Fridays, 11.

Professor THORNDIKE.

First Semester.—Lectures on the Pre-Shakespearian Drama and the reading of a number of plays. A careful and detailed study of three of Shakespeare's plays; for 1902-3, Richard II, King Lear, the Tempest.

Second Semester.—All of Shakespeare's plays are read in chronological order. Lectures on the Development of Shakespeare's Art, with especial attention to his relations to contemporary dramatists.

E—*Non-dramatic Poetry in the Sixteenth and Seventeenth Centuries.* 2 hours.

Professor THORNDIKE.

First Semester.—Spenser and his Contemporaries.

Second Semester.—Milton and his Contemporaries.

Not given in 1902-3.

F—*Classicism 1660–1789.*

2 hours.

Tuesdays, Thursdays, 11.

Professor THORNDIKE.

First Semester.—From the Restoration to the Death of Pope, 1660–1745; Classicism in Poetry; the Rise of the Essay; the Development of Prose; the Development of the Novel.

Second Semester.—From the death of Pope to the French Revolution, 1745–1789; the Decline of Classicism; the Beginnings of Romanticism.

Lectures, reading, papers.

Omitted in 1902–3. Given in 1903–4 and alternate years.

G—*The Romantic Movement 1789–1830.*

2 hours.

Wednesdays, Fridays, 8.

Professor THORNDIKE.

First Semester.—Burns, Cowper, Wordsworth, Coleridge, Southey, Lamb, Hazlitt.

Second Semester.—Scott, Byron, Keats, Shelley, Leigh Hunt, De Quincey.

Lectures, reading, papers.

Omitted in 1902–3. Given in 1903–4 and alternate years.

H—*English Poetry in the Nineteenth Century 1830–1900.*

2 hours.

Tuesdays, Thursdays, 11.

Professor THORNDIKE.

First Semester.—Tennyson, Mrs. Browning.

Second Semester.—Browning, Matthew Arnold, Clough, the Rossettis, and other poets of the period.

Lectures, a large amount of reading, and papers on subjects suggested by the course.

Given in 1902–3 and alternate years.

I—*English Prose from 1830 to 1880.*

2 hours.

Wednesdays, Fridays, 8.

Professor THORNDIKE.

First Semester.—Carlyle, Ruskin, Emerson.

Second Semester.—Matthew Arnold, Newman, Pater, Thackeray, Dickens, George Eliot, Meredith.

These writers are studied as representatives of the thought and life of the period. A large amount of reading is required, and papers on topics suggested by the course.

Given in 1902–3 and alternate years.

J—*The Development of the Novel in English.* 2 hours.

Tuesdays, Thursdays, 9.

Assistant Professor CROW.

First Semester.—Mediæval and Elizabethan prose narratives; the classic novelists.

Second Semester.—Study of selected nineteenth century novels; the short story.

Major work: Nine year-hours in addition to Course A.

FRENCH.

AA—*Elementary French.* 5 hours.

Daily—Section I. 8.

Section II. 9.

Section III. 11.

Section IV. 2.

Miss FREEMAN. Mr. LE DAUM.

Grammar (DeBordes). Reader (Whitney). La Grammaire (Labiche). Colomba (Mérimée). Baillot Brugnot's Composition. Voyage de M. Perrichon. Le Roi des Montagnes (About). Easy French History (Sicard). Simple dictations, private reading and composition.

This course may not be taken to remove language requirements for admission.

A—*Modern French.* 4 hours.

Mondays, Tuesdays, Thursdays, Fridays.

Section I. 10.

Section II. 11.

Professor BAILLOT. Miss FREEMAN.

Baillot - Brugnot's Composition. Advanced Grammar. Reading. Easy French History (Sicard). La Joie fait Peur (Madame de Girardin). Les Doigts de Fée (Eugène Scribe). On rend l'Argent (Coppée). Contes de Daudet (Freeborn). Le Monde où l'on s'Ennuie (Pailleron).

Contes de Maupassant (White). Quatre-Vingt Treize (Victor Hugo). French Lyrics (Canfield). Le Pater (Coppée). Hernani (Hugo). Private reading: Selections from Loti (Cameron). Lessons in Idiomatic French (Hennequin). Essays.

Open to all who have completed AA. Classical and Philosophical students may elect this as a four-hour course, omitting the Composition. Scientific students may, in the second term, substitute for Lyrics and Drama a special course in scientific reading.

B—*Classic Literature of the 17th and 18th Centuries.* 3 hours.

Mondays, Wednesdays, Fridays, 8 and 9.

Professor BAILLOT.

First Semester, 17th Century Composition. (Grandgent.)
 Le Cid, Polyeucte, (Corneille). Athalie, (Racine). Le Mis-
 anthrope, L'Avare (Molière).

Collateral reading: La Société Française au 17^e Siècle
 (Crane). Dictations and short lectures on the classic literature.

Second Semester, 18th Century. Gil Blas (Lesage). Zaïre
 and letters (Voltaire). Le Barbier de Séville and letters
 (Beaumarchais). A study is also made of the other authors of
 the eighteenth century. This course is a continuation of the
 first semester, Course B, and is open only to students having
 had that course. Exercises on French Syntax.

C—*General Review of French Literature.* 2 hours.

Tuesdays, Thursdays, 1.

Professor BAILLOT.

Demogeot's French Literature and Le Seizième Siècle en
 France (Darmesteter and Hatzfeld) will be used as text-book,
 and collateral reading is assigned by the instructor. Dicta-
 tions. Compositions.

D—*Recent French Literature.* 2 hours.

Tuesdays, Thursdays, 9.

Professor BAILLOT.

Study of the literature of the Nineteenth Century, taking as
 a basis George Pellissier's Le Mouvement Littéraire au XIX^e
 Siècle. Collateral reading. This course is given in French.
 Open only to students who have had Course B.

E—*Advanced French.* 2 hours.

Wednesdays, 8.

Professor BAILLOT.

The topics considered will be closely related to those of
 Courses C and D; but students will be expected to carry on
 special studies with prepared papers. For 1901-1902 the as-
 signed topics have been the poets of the second half of the
 Nineteenth Century.

F—*Old French and Early French Literature.* 1 hour.

Day and hour to be arranged.

Professor BAILLOT.

Open only to students having had Courses B and C or D.
Omitted in 1901-1902.

G—*Scientific French.* 3 hours.

Hours to be arranged.

Miss FREEMAN.

Herdler's Scientific French. Articles from scientific periodicals.

H—*Conversation with Private Reading.* 1 hour.

Wednesdays, 2 to 4.

Professor BAILLOT.

Advanced Conversation. Conversation with private reading. Open to those who have had AA, but registration to be subject to the approval of the head of the department.

Le Cercle Français meets on alternate Wednesdays at 7:30 p. m., and is open to all students having completed courses AA and A.

J—*Conversation.* 1 hour.

Tuesdays and Thursdays, 9.

Miss FREEMAN.

Le Français Pratique (Bercy). Private Reading. Open to those who have had or are having AA.

Major work: Nine year-hours, besides courses AA and A.

GEOLOGY.

A—*General Geology; Physiography.* 3 hours.

Mondays, Wednesdays, Fridays, 10.

Professor GRANT.

A general introduction, including dynamical, structural and historical geology, followed by physiographic geology and the physiography of the United States. Lectures, recitations, readings, and the study of specimens, maps and models.

Course C may be taken conveniently in connection with Course A.

In this course, and in the other courses in geology, part of the work consists of excursions taken into the adjacent country for the study of geological phenomena in the field.

A knowledge of the elements of chemistry will be advantageous to those taking courses in geology, and will be necessary for those who take a major in geology.

B—*Economic Geology.*

2 hours.

Tuesdays, Thursdays, 11.

Professor GRANT.

The materials of economic importance obtained from the earth's crust are to be studied from the standpoints of geological relations, origin, geographical distribution, exploration, use, etc. The chief subjects considered are coal, natural oil and gas, building materials, soils, ores of the important metals (such as iron, copper, silver, gold), and water supply.

Open to those who have completed Geology A or Mineralogy A. The second semester of Course B may be taken without the first.

C—*Practical Geology.*

2 hours.

Tuesdays, Thursdays, 10.

Professor GRANT.

A more extended study than is given in Course A of important topics of dynamical and structural geology; methods of geological work; preparation of a geological and topographical map of a small area. Owing to the nature of the work, part of the time devoted to this course must be given on afternoons or Saturdays instead of at the hours mentioned above.

Open to those who are taking or who have completed Course A. The second semester of Course C may be taken without the first.

D—*Paleontology; Historical Geology.*

2 hours.

Hours to be arranged.

Professor GRANT.

First Semester.—Paleontology. A discussion of the principles of paleontological geology and a study of the more important groups of fossils.

Second Semester.—Historical Geology. A study of historical geology, with special reference to the stratigraphy of the United States, the development of the North American continent, and the life characteristic of the different periods.

Open to those who have completed Course A.

E—*Petrography.*

3 hours.

Lectures, Tuesdays, 8.

Hours for laboratory work to be arranged.

Professor GRANT.

The first part of the course is devoted to the study of the common rock-forming minerals by means of the petrographical microscope, and the second part is devoted to the study of the more important rocks from the standpoints of texture, composition, classification, genesis, geological occurrence, and means of investigation.

Open to those who have completed Geology A or Mineralogy A.

NOTE:—It is expected that of Courses B,D, and E no more than two will be given in any one year. Students desiring to take any of these courses should consult with the instructor before registering.

F—*Advanced Course.*

Hours and time to be arranged.

Professor GRANT.

Students who have completed certain of the preliminary courses may take up the study of some particular phase of geology, or of the geology of some particular district.

PRIMARILY FOR GRADUATE STUDENTS.

G—*Pre-Cambrian Geology.*

Hours and time to be arranged.

Professor GRANT.

A study and discussion of the principles and methods used in investigating the non-fossiliferous rocks, especial attention being paid to metamorphism. Followed by a study of the geology of the Lake Superior region, with special reference to the formations which contain the extensive deposits of copper and iron ores.

H—*Research Work.*

Hours and time to be arranged.

Professor GRANT.

Investigation along certain lines, especially the investigation of the geology of some particular district. The results of the work are to be presented in the form of a thesis.

Major work: Ten year-hours, which may include Mineralogy A.

GERMANIC LANGUAGES AND LITERATURES.

(Other than English.)

AA—*Elementary Course.*

5 hours.

Mondays, Tuesdays, Wednesdays, Thursdays, Fridays, 2.

Mr. EDWARD.

Pronunciation, grammar, selections in prose and verse, German composition. Open to those who have less than 15 year-hours college credit.

This course may not be taken to remove language requirements for admission.

AB—*Elementary Course.*

4 hours.

Section I, Mondays, Tuesdays, Thursdays, Fridays, 8.

Section II, Mondays, Tuesdays, Thursdays, Fridays, 10.

Professor CURME (Section I). Dr. SIMPSON (Section II).

Pronunciation, grammar, selections in prose and verse, German composition.

This course may not be taken to remove language requirements for admission.

A—*Intermediate Course.*

4 hours.

Section I, Tuesdays, Wednesdays, Thursdays, Fridays, 9.

Section II, Tuesdays, Wednesdays, Thursdays, Fridays, 10.

Section III, Tuesdays, Wednesdays, Thursdays, Fridays,

11.

Dr. SIMPSON (Section I). Mr. EDWARD (Sections II and III).

First Semester.—Lessing's *Minna von Barnhelm* and *Emilia Galotti*; German lyrics and ballads; Schiller's *Wilhelm Tell*; German composition once a week.

Second Semester.—Lyrics and ballads; Schiller's *Maria*

Stuart; Goethe's Hermann und Dorothea; German composition.

Open to those who offer "a" and "b" for entrance, and to those who have completed AA or AB.

BB.—*Classical Prose and Poetry; Composition.* 4 hours.

Mondays, Tuesdays, Thursdays, Fridays, 8.

This course is planned especially for those students who have had three years' secondary work in German.

Dr. SIMPSON.

B—*Literature Associated with the Thirty Years' War.* 3 hours.

Section I, Mondays, Wednesdays, Fridays, 8.

Section II, Mondays, Wednesdays, Fridays, 11.

Section III, Mondays, Wednesdays, Fridays, 2.

Professor HATFIELD and Professor CURME (Section II).

First Semester—Schiller's *Dreissigjähriger Krieg* and *Wallenstein*.

Second Semester—Freytag's *Rittmeister von Alt-Rosen* and *Aus dem Jahrhundert des grossen Krieges*; Scheffel's *Trompeter von Säckingen*.

Course H may suitably be combined with this course.

Open to those who have taken Course A. Course B may be taken a second time, with new subjects, for a credit of two hours.

C—*German Literature.* 3 hours.

Mondays, Wednesdays, Fridays, 3.

Professor HATFIELD.

First Semester.—German literature from Luther to Goethe. Lectures, and reading of works by Luther, Sachs, Logau, Hagedorn, Kleist, Gellert, Gleim, Klopstock, Lessing, Wieland, Gerstenberg, Bürger, and Voss.

Second Semester.—Heine, Platen, and Geibel.

This course naturally follows Course B. The ability to read and interpret German works by an effective oral rendition of the original, as well as to understand lectures delivered in German, is pre-supposed.

Not given in 1902-1903.

D—*Goethe and Schiller.* 3 hours.

Mondays, Wednesdays, Fridays, 3.

Professor HATFIELD.

First Semester.—Goethe's life and works, 1790-1832.

Second Semester.—Schiller's life and works.

Open to those who have completed Course B, under the conditions mentioned under Course C.

Given in 1902-1903.

E—*Advanced Group.* 2 hours.

Tuesdays, Thursdays, 8. (Subject to change.)

Professor HATFIELD.

The principles of literary criticism, applied especially to Goethe and Schiller; study of the history of their works from the sources. It is very desirable to pursue Course D in connection with this course, which is intended chiefly for advanced and graduate students. In all cases enrollment will be at the discretion of the instructor. As far as opportunity allows, suitable original work will be brought to publication.

F—*Goethe's Life and Works, 1749-1790.* 2 hours.

Tuesdays, Thursdays, 3.

Dr. SIMPSON.

Open to those who have had Course B.

G—*Colloquial German.* One hour's credit.

Tuesdays, Thursdays, 9.

Mr. EDWARD.

Fischer's *Betrachtungen eines in Deutschland reisenden Deutschen* and other material. Open to all who have had one year's German, and to others by special permission. The two hours of this course count as one hour in term-credits.

H—*Advanced German Composition.* 2 hours.

Mondays, Wednesdays, 8.

Mr. EDWARD.

Von Jagemann's Syntax and Prose Composition; White's Selections for German Prose Composition with specially assigned original work. Open to those who have had Course A, or its equivalent.

J—*Modern German Drama.* 2 hours.

Tuesdays, Thursdays, 4.

Professor CURME.

Two courses are given in Modern German Drama in alternate years. The aim of these courses is to present a general outline of German life in the nineteenth century as reflected in the drama, exclusive of the classical works of Goethe and Schiller, which belong more properly to the study of the preceding century. The character of the several periods, the formative influences at work, the lines of literary development, are carefully traced in the form of lectures, but the main work consists in reading and studying a large number of representative masterpieces in order that the student may receive the pleasure and benefit of direct acquaintance with the literature.

(a) First Half of Century. Heinrich von Kleist, Grillparzer, Raimund, Gutzkow, Hebbel, Otto Ludwig.

To be given in 1902-1903.

(b) Second Half of Century. Anzengruber, Wildenbruch, Sudermann, Hauptmann, Fulda, Georg Hirschfeld.

Given in 1901-1902.

K--*Gothic and Old High German.*

4 hours.

Hours to be arranged.

Professor CURME.

First Semester.—Gothic. Streitberg's *Gotisches Elementarbuch*, Stamm-Heyne-Wrede's *Ulfilas*, Uhlenbeck's *Wörterbuch der gotischen Sprache*, and Grienberger's *Untersuchungen zur gotischen Wortkunde*.

The study of Gothic lies at the very base of the thorough study of all Germanic languages, and hence is fundamentally essential to all students who intend to study German or English historically. The phonology and inflectional systems of the language are carefully studied to secure a good basis for future work. About one hundred pages of Gothic text are read. Daily exercises in etymology, word-formation, vowel gradation, application of Grimm's and Verner's laws, etc.

Second Semester.—Old High German. Braune's *Althochdeutsche Grammatik* is studied carefully to secure a good basis for the study of the growth and development of High German. Braune's *Althochdeutsches Lesebuch* is translated into the modern idiom, accompanied by the study of the photographic reproductions of the old manuscripts of this period in Ennecerus' *Die ältesten deutschen Sprachdenkmäler* and Hench's *Der althochdeutsche Isidor*. Daily discussion of language and literary questions.

L—*Middle High German; Old Saxon; Comparative Grammar.*
4 hours.

Hours to be arranged.

Professor CURME.

First Semester.—The study of the growth and development of High German begun in Course K is continued here. The work is based upon Michels' *Mittelhochdeutsches Elementarbuch* and the study of the texts read. On account of the beauty of the classics of this period and the valuable pictures they give of the life of the Middle Ages, more attention is paid to literature for its own sake than in the older periods, where language questions claimed relatively more consideration. The following masterpieces are read: Zarncke's edition of the *Nibelungenlied*, in connection with a brief comparative study of other texts of this epic; Hartmann von Aue's *Iwein*; Walther von der Vogelweide's poems.

Second Semester.—Old Saxon. Comparative grammar.

(a) OLD SAXON. Holthausen's *Altsächsisches Elementarbuch*, Behaghel's *Heliand* accompanied by the study of the photographic reproductions of the old manuscripts of this period in Gallée's *Facsimilesammlung*. (2 hours weekly.)

(b) COMPARATIVE GRAMMAR. The phonology and inflectional systems of the Germanic languages are compared with one another and those of other languages of the Indo-European family. Streitberg's *Urgermanische Grammatik*, Hirt's *Der Indo-Germanische Ablaut* and Dieter's *Altgermanische Dialekte* are used as texts. (2 hours weekly.)

M—*Icelandic (Old Norse).* 2 hours.

Hours to be arranged.

Dr. SIMPSON.

Kahle's *Altisländisches Elementarbuch*. Selections from the Younger and Elder Edda. Text-books: Hildebrand's *Lieder der älteren Edda*; Gering's *Glossar zu den Liedern der Edda*; Noreen's *Altnordische Grammatik*.

For advanced and graduate students; the course to be given provided not less than three students elect the same.

For Norwegian-Danish and Swedish, see the catalogue under these heads.

Major work: Nine year-hours from courses beyond A.

Courses B, G, and H should be taken by all who intend to become teachers of German in secondary schools.

GREEK LANGUAGE AND LITERATURE.

AA—*White's First Greek Book Complete and First Book of Xenophon's Anabasis. Greek Composition.* 5 hours.

Mondays, Tuesdays, Wednesdays, Thursdays, Fridays, 10.

Professor SCOTT.

This course may not be taken to remove language requirements for admission.

AB—*Xenophon's Anabasis, Books II, III, IV. Thirty lessons in Greek Composition, Homer's Iliad, three books.* 5 hours.

Mondays, Tuesdays, Wednesdays, Thursdays, Fridays, 8.

Mr. KELLER.

Courses AA and AB are designed for students who, entering college without Greek, desire to take up the study and complete the requirements for the degree of A. B.

A—*First Semester.—Lysias, Select Orations as a basis for Greek Composition. Homer.* 4 hours.

Section I.

Tuesdays, Wednesdays, Thursdays, Fridays, 9.

Professor SCOTT.

Lysias, Select Orations. Xenophon's Memorabilia of Socrates. Greek Composition based on the text. 4 hours.

Section II.

Tuesdays, Wednesdays, Thursdays, Fridays, 11.

Professor BAIRD.

Second Semester.—Work same as in first semester. Sections interchanging topics and instructors. 4 hours.

B—*Æschines against Ctesiphon. Sophocles' Antigone. Plato's Gorgias.* 3 hours.

Mondays, Wednesdays, Fridays, 10.

Professor BAIRD.

C—*Selections from Greek Lyric Poets. Æschylus' Prometheus Bound. Aristophanes' Clouds. Euripides' Medea.* 2 hours.

Tuesdays, Thursdays, 3.

Professor BAIRD.

Not given in 1902-1903.

- D—*Demosthenes on the Crown. Selections from Plato's Republic.*
New Testament. Lucian. 2 hours.

Professor BAIRD.

Given in 1902-1903.

- F—*History of Greek Literature from Homer to Greek Church*
Fathers. 3 hours.

Mondays, Wednesdays, Fridays, 3.

Professor BAIRD.

This course consists of lectures, and recitations based on translations. No knowledge of Greek is required. The aim is to secure familiarity with the great masterpieces of Greek literature. The course is especially important to those who expect to become teachers of literature.

Open to all students who have completed thirty hours.

- G—*Homer and Epic Poetry.* 4 hours.

Hours to be arranged.

Professor SCOTT.

Homer will be read entire.

Students will prepare papers on assigned topics.

- I—*Greek Oratory.* 4 hours.

Professor SCOTT.

Not given in 1902-1903.

- L—*Greek Prose Composition.* 1 hour.

Professor SCOTT.

Not given in 1902-1903.

Major work:—C, D, and F. For any of these Greek G, I, or L, may be substituted.

- N—*The Synoptic Gospels.* 3 hours.

Tuesdays, Wednesdays, Thursdays, 10.

Professor HAYES.

HEBREW.

- A—*Elements of Hebrew.* 4 hours.

Tuesdays, Wednesdays, Thursdays, Fridays, 4.

Mr. DAVIDSON.

B—*Historical Books.*

3 hours.

Wednesdays, Thursdays, Fridays, 3.

HISTORY.

NOTE:—The alphabetical arrangement of the courses does not signify that they shall be taken *only* in this order. In general, AB is regarded as an introductory course to the whole field of history. Either A, C, or BC may also be chosen as a first course. D, E, F, J, may be taken most profitably in the order named. G may be elected by those who have sixty semester-hours credit. Other students who desire to take this course must receive permission from the instructor in charge. L should be preceded by AB. The usual method of conducting the courses in History is by lectures, collateral reading, and text-books.

AB—*General History to 1789.*

3 hours.

Mondays, Wednesdays, Fridays, 11.

Assistant Professor WILDE.

This course is designed to give a general view of the field of history to the date specified. It will serve as an introduction to the national histories, or to an intensive study of the periods of history.

A—*English History.*

3 hours.

Mondays, Wednesdays, Fridays, 3.

Professor SHEPPARD.

First Semester.—English History to the Restoration.

Second Semester.—English History from the Restoration to Contemporary Times.

B—*English Constitutional History and the History of Civilization.*

2 hours.

Wednesdays, Fridays, 2.

Professor SHEPPARD.

First Semester.—English Constitutional History.

Second Semester.—History of Civilization.

C—*Colonial and Constitutional History of the United States.*

2 hours.

Tuesdays, Thursdays, 3.

Professor SHEPPARD and Professor JAMES.

First Semester.—Settlement of the Colonies, French and Indian War, and the Revolution.

Second Semester.—Constitutional History of the United States.

BC—*American History.* 2 hours.

Tuesdays, Thursdays, 11.

Professor JAMES.

The Political History of the United States from the Revolution. The formation of the Union, the rise and growth of parties, the influence of westward expansion and of slavery on the political life.

Students may secure three hours credit by doing extra assigned work.

CD—*Modern Constitutional Governments.* 2 hours.

Tuesdays, Thursdays, 9.

Professor JAMES.

The object of this course is to acquaint the student with the history and general principles of the Constitution of the United States. The origin and development of some of the State Constitutions and the leading features of the governments of the European States are also considered.

To be given in the first semester of 1902-1903, and is open to students who have thirty semester-hours credit, after consultation with the Professor in charge.

D—*Greek and Roman History.* 2 hours.

Tuesdays, Thursdays, 8.

Assistant Professor WILDE.

First Semester.—History of Greece from the earliest times to the Roman Conquest. Constant use of the library for the literature of the subject; reports on reading.

Second Semester.—History of Rome from the earliest times to the fall of the empire in the West. Assigned reading with reports on the same, submission of a thesis.

E—*Continental Europe during the Middle Ages.* 3 hours.

Mondays, Wednesdays, Fridays, 10.

Assistant Professor WILDE.

This course is intended to furnish an outline of the history of Europe from the fall of Rome to about the middle of the thirteenth century. It deals with the political, religious and intellectual development of the period. One thesis. Open to those having 30 semester-hours credit.

F—*The Renaissance and Reformation.* 2 hours.

Tuesdays, Thursdays, 2.

Assistant Professor WILDE.

First Semester.—Political History from the middle of the thirteenth century to the close of the fifteenth century; the Renaissance especially in Italy,—the intellectual development, its contacts with antiquity and the middle ages, and its influences on modern life.

Second Semester.—The Reformation especially in Germany, France, and England; reforming movements before the Reformation; ecclesiastical, political, and social effects of the Reformation.

G—*European History since the Outbreak of the French Revolution.* 3 hours.

Mondays, Wednesdays, Fridays, 9.

Professor JAMES.

Political History, showing the progress of Democracy, and aiming to give an understanding of the present condition of European politics.

First Semester.—Causes and Events Connected with the Period of the French Revolution and the Napoleonic Wars.

Second Semester.—The Evolution of Constitutional Government in the European States; Unification of Germany and of Italy; the Eastern Question, and Present Political Conditions.

H—*Diplomatic History of the United States.* 2 hours.

Tuesdays, Thursdays, 10.

History of the foreign relations of the United States from the beginning of the Revolution to our own time. Special attention is given to the commercial treaties following the Revolution, to annexations of territory, to the relations with Spanish America, and to the period of the Civil War.

I—*Methods of teaching History with special reference to the work of the Secondary Schools.* 1 hour.

Hours to be selected.

Professor JAMES and Assistant Professor WILDE.

Open to those who make History their major and to others of suitable preparation after consultation with one of the Professors in charge.

To be given in the Second Semester.

J—*European History during the Seventeenth and Eighteenth Centuries.* 2 hours.

Tuesdays, Thursdays (hour to be selected).

Begins with Thirty Years' War; especial attention to its effect upon the institutions of the Empire and of the various German states. Rise and decline of Sweden. Frederick the Great and Prussian Ascendency. Triumph of French Absolutism in the Reign of Louis XIV. The History of England for the period so far as it is connected with the continent.

K—*French History.* 2 hours.

Assistant Professor WILDE.

Political and institutional history of France from the Celtic occupation of Gaul to the death of Henry IV.

Not given in 1902-3.

L—*Church History.* 3 hours.

Tuesdays, Wednesdays, Fridays, 10.

Professor LITTLE.

Post-Nicene History of the Christian Church. Christianity within the Roman Empire; the Struggle of the Church with Paganism, with Barbarism, and with Mohammedanism; the Development of the Hierarchy; the Rivalries of the Patriarchates; the Upbuilding of the Papacy and the Growth of Monachism; the Relations of the Popes to the Byzantine, Frankish, and German Emperors; the Crusades; the Growth and Decay of Papal Power; the Monastic Schools; the Universities; the Mendicants and Mediæval Heretics; Scholasticism and Superstition; the Church and Mediæval Society; History of the Modern Church.

M—*Seminary in American History.* 2 hours.

Hours to be arranged.

Professor JAMES.

Open only to those whom the professor in charge considers qualified. One meeting of two hours each week; but each student must give sufficient time in preparation to entitle him to three hours of credit. Additional credits may be acquired if arranged for at the time of registration. During the year 1901-1902 the time was given to the study of the

period in American History, 1765-1820, using the original sources as a basis for the work.

History Club.

1 hour each month.

Papers are given by the instructors and by advanced students. Reviews of new books and other historical literature are presented. During the year 1901-1902 special lectures were given by

Professor CHARLES J. LITTLE,

"Place of History in Education."

Reverend H. G. SMYTHE,

"Mediæval Monasticism and its Survivals in the Present."

Superintendent H. H. KINGSLEY,

"The Teaching of History in Graded Schools."

Professor J. A. JAMES,

"Washington: Sketches of His Life; His Place in History."

Given on February 22.

Major G. M. McCONNEL,

"The People of Illinois."

History Conference.

A monthly meeting of the instructors of the History department and teachers of History in the schools of Evanston and immediate vicinity for the consideration of topics of interest to teachers. Graduate students in History, and Seniors who "major" in the subject and intend to teach, are invited to participate in this Conference.

Major work: Ten year-hours.

ITALIAN.

A—*Elementary Italian.*

3 hours.

Mondays, Wednesdays, Fridays, 9.

Miss FREEMAN.

Grandgent's Grammar: Bowen's Reader: Cuore (De Amicis).

I Promessi Sposi (Manzoni).

Modern Prose Tales. Dante (40 cantos); Private Reading; Collateral reading required: Howell's Italian Poets, Symonds' Introduction to Dante, Church's Dante, Rossetti's Dante and his Circle. The courses in Italian and Spanish will be given in alternate years. The course in Italian was given in 1901-1902.

LATIN LANGUAGE AND LITERATURE.

A—*First Semester*—*Livy, two books, with an additional historical selection.*

Second Semester—*Cicero de Amicitia; Terence, Andria and Phormio; Latin composition throughout the year; Grammatical reviews.* 4 hours.

Mondays, Tuesdays, Thursdays, Fridays, 9, 10, 2.

Acting Professor CLEMENT and Assistant Professor LONG.

B—*First Semester*—*Horace, Odes and Satires; Catullus.*

Second Semester—*Tacitus, Germania and Agricola; Selections from the Histories.* 3 hours.

Mondays, Wednesdays, Fridays, 9, 11.

Acting Professor CLEMENT and Assistant Professor LONG.

C—*First Semester*—*Quintilian, Horace, Epistles.*

Second Semester—*The Reign and Character of Tiberius—Tacitus, Annals, with Comparison of authorities early and modern.* 3 hours.

Mondays, Wednesdays, Fridays, 10.

Professor BONBRIGHT.

D—*First Semester*—*Latin Elegists,—Tibullus, Propertius; Pliny's Letters.*

Second Semester—*Prose Selections of the Empire.*

3 hours.

Mondays, Wednesdays, Fridays, 10.

Acting Professor CLEMENT.

Omitted in 1902–1903.

E—*First Semester*—*Greek Schools of Philosophy at Rome,—Lucretius, three books with lectures.*

Second Semester—*Cicero, philosophical selections.*

2–3 hours.

Tuesdays, Thursdays, 2.

Professor BONBRIGHT.

Omitted 1902–1903.

F—*Latin Comedy and Satire—First Semester—Plautus, two or three Plays.*

Second Semester—Juvenal; Martial. 2–3 hours.

Tuesdays, Thursdays, 2.

Professor BONBRIGHT.

G—*Latin Literature—its development and history studied with attention to contemporary Political and Social history, readings with lectures.* 2 hours.

Professor BONBRIGHT.

Omitted 1902–1903.

H—*Vergil entire, read with comparison of other examples of hexameter, lectures on the Roman epic.*

Assistant Professor LONG. 2 hours.

Omitted 1902–1903.

J—*Latin Composition.* 1 hour.

Fridays, 3.

Assistant Professor LONG.

The course is open to those who have taken Course A.

K—*First Semester—Cicero, orations.*

Second Semester—Advanced practice in writing Latin.

Assistant Professor LONG. 2 hours.

Omitted 1902–1903.

L—*Cicero, Letters.*

Study of the diction and style of Cicero and correspondents. Survey of Roman Epistolography.

2 hours.

Hours to be arranged.

Assistant Professor LONG.

Major work: Course B, with C or D, and E or F, or an equivalent.

MATHEMATICS.

A—*Algebra and Plane Trigonometry.* 4 hours.

Mondays, Tuesdays, Wednesdays, Thursdays.

Five sections at 8, 9, 11, 2, 3.

Professor HOLGATE, Dr. KEPPEL, and Mr. WILSON.

First Semester.—Algebra, including the theory of quadratic

equations, ratio and proportion, progressions, permutations and combinations, binomial theorem, logarithms and their application to interest and annuities, with an introduction to the general theory of equations and determinants.

Second Semester.—Plane Trigonometry, including the solution of oblique triangles.

Required of all candidates for a degree, except those who elect Course AB.

AB—*Algebra, Trigonometry, and Analytical Geometry.*

5 hours.

Mondays, Tuesdays, Wednesdays, Thursdays, Fridays.

Two sections at 10, 11.

Professor WHITE and Dr. KEPPEL.

First Semester.—Algebra and Plane Trigonometry; a briefer course than is given in Course A.

Second Semester.—Plane Analytical Geometry. An elementary course on the straight line and conic sections.

Course AB may be taken by any student who has met the entrance requirements in Algebra.

AA—*Advanced Algebra.*

2 hours.

Tuesdays, Thursdays, 10.

Professor HOLGATE.

Second Semester.—A continuation of the work in Algebra of Courses A and AB, covering the elements of the theory of equations, determinants, irrational numbers, etc.

Open to students who have completed the first semester of either Course A or Course AB, and recommended to all who expect to teach mathematics in secondary schools.

B—*Plane Analytical Geometry and Calculus.*

3 hours.

Mondays, Wednesdays, Fridays, 8.

Dr. KEPPEL.

First Semester.—Plane Analytical Geometry; an elementary course on the straight line and conic sections.

Second Semester.—Differential and Integral Calculus; a brief course in formal differentiation and integration of the common functions, with applications to maxima and minima, indeterminate expressions, lengths and areas of plane curves, and volumes of solids.

Open to students who have completed Course A or its equivalent.

BB—*Differential and Integral Calculus.* 3 hours.

Mondays, Wednesdays, Fridays, 9.

Professor WHITE.

First Semester.—Theory of limits, differentiation of common functions, maxima and minima.

Second Semester.—Indefinite and definite integrals, change of variable, areas and volumes, average values of functions.

Open to students who have completed Course AB or its equivalent.

C—*Elementary Mechanics.* 3 hours.

Mondays, Wednesdays, Fridays, 9.

Professor HOLGATE.

First Semester.—Statics. Composition and resolution of forces, moments of force, general conditions of equilibrium, friction.

Second Semester.—Dynamics. Velocities and accelerations, simple harmonic motion, work, energy.

Open to students who have completed Course A or its equivalent.

D—*Theory of Equations and Determinants.* 2 hours.

Tuesdays, Thursdays, 9.

Professor WHITE.

First Semester.—Existence of roots of an equation, symmetric functions of the roots, solution of cubic, quartic, and cyclotomic equations.

Second Semester.—Determinants, solution of numerical equations, insolubility of the general quintic.

E—*Solid Analytical Geometry.* 3 hours.

Mondays, Wednesdays, Fridays, 10.

Professor WHITE.

Second Semester.—An introductory course in Analytical Geometry of Three Dimensions. May be taken in the second semester as a continuation of Course B, or may be elected by students who have completed Course AB or its equivalent.

F—*Geometrical Applications of the Calculus.* 3 hours.

Mondays, Wednesdays, Fridays, 2.

Professor WHITE.

Infinitesimal Analysis applied to plane curves, twisted

curves, and surfaces. Developables, evolutes, geodesic lines, curvature, congruences of lines, contact of curves and surfaces.

Omitted in 1901-1902, to be given in 1902-1903.

G—*Analytical Geometry.* 3 hours.

Mondays, Wednesdays, Fridays, 8.

Professor WHITE.

Open to students who have taken a previous course in Analytical Geometry. The first semester is devoted to a detailed study of the conic sections. The work of the second semester comprises systems of conics, envelopes, the principle of duality, projection, etc.

H—*Modern Synthetic Geometry.* 3 hours.

Mondays, Wednesdays, Fridays, 10.

Professor HOLGATE.

Introduction of infinitely distant elements into geometry; central projection; perspectivity and projectivity; generation of conics from projective forms; properties of ruled quadric surfaces; involution; poles and polars; systems of conics.

Elective for students who have completed one year from Courses B, C, or BB.

J—*Definite Integrals and Differential Equations.* 3 hours.

Mondays, Wednesdays, Fridays, 2.

Professor HOLGATE.

First Semester.—Integral Calculus: Definite Integrals, with applications to surfaces, volumes, averages, and center of mass.

Second Semester.—Differential Equations, together with chapters on cycloids and other roulettes.

K—*Analytical Mechanics.* 2 hours.

Tuesdays, Thursdays, 8.

Professor HOLGATE.

A course in Theoretical Mechanics, open to students who have taken Course B or its equivalent. It includes a study of vectors, uniformly accelerated motions, simple harmonic motions and their composition, elliptic motion, central orbits, force, energy, work, etc.

- L—*Surveying: theory and practice.* 2 hours.
Tuesdays, Thursdays, 2.

Dr. KEPPEL.

The use and adjustments of the compass, engineer's transit, and Y level; the keeping of records and platting of observations; calculation of heights, distances, and areas; elements of the theory of errors. Field work with the instruments will be carried on in small divisions in the Fall and Spring.

- M—*Primarily for Graduates.* 3 hours.
Hours to be arranged.

Professor WHITE.

First Semester.—Theory of Functions of a complex variable.
Second Semester.—Elliptic Functions.

- N—*Primarily for Graduates.* 2 hours.
Hours to be arranged.

Professor HOLGATE.

First Semester.—The synthetic treatment of systems of conic sections.

Second Semester.—The Newtonian Potential.

Major work: Fifteen year-hours, including Courses A or AB, and B or BB.

MINERALOGY AND ECONOMIC GEOLOGY.

- A—*Mineralogy; Blow Pipe Analysis.* 3 hours.

Lecture, Wednesdays, 11. Laboratory hours can be arranged between 8 and 12 Mondays, Tuesdays, Wednesdays, Thursdays and Fridays.

Professor CROOK.

First Semester.—Mineralogy; elements of crystallography; descriptive mineralogy, including physical properties, chemical composition, occurrence, and association of minerals; determination of minerals by physical characteristics. About one hundred and fifty minerals are studied to learn methods of determination and investigation, and to gain information fundamental for geologists, miners, chemists, and physicists, as well as that desirable for a general education. Dana's "Text-Book of Mineralogy."

Second Semester.—Blow pipe analysis; wet and dry methods

of investigation to confirm physical determinations. Landauer's "Blowpipe Analysis."

This course is intended for beginners.

C—*Economic Geology.* 2 hours.

Lectures, Tuesdays, Thursdays, 4.

Professor CROOK.

First Semester.—A study of soils, fertilizers, abrasives and lubricants, refractory and fictile materials, building stone, coal, mineral oil and natural gas—substances embraced under the designation of non-metallic mineral resources.

Second Semester.—Metallic mineral products—gold, silver platinum, copper, iron, lead, zinc, mercury, and some metals of minor importance—studied in regard to their origin, geological relations, geographical distribution and use.

Tarr's "Economic Geology of the United States."

D—*Physical Crystallography.* 2 hours.

Hours to be arranged.

Professor CROOK.

Optical, thermal, magnetic, and molecular properties of crystals. Wooden and glass models, reflecting goniometer and microscope used.

Williams' "Elements of Crystallography" and Groth's "Physikalische Krystallographie."

E—*Assaying.* 2 hours.

Wednesdays, 2-6.

Professor CROOK.

First Semester.—Scorification, cupellation, parting, and weighing of gold and silver.

Second Semester.—Crucible process of precious metals, and assaying of copper, lead and zinc.

Open to those students who have completed Chemistry A and Mineralogy A.

F—*Advanced Course.* 2 to 5 hours.

Hours to be arranged.

Professor CROOK.

A continuation of the work begun in any one of the courses in general mineralogy, blowpipe analysis, optical mineralogy, or economic geology; for the purpose of preparing the student

to enter upon work of special investigation. (See Courses H and I.)

Primarily for Graduate Students.

H—*Applied Geology.*

5 hours.

Hours to be arranged.

Professor CROOK.

For graduate students who have completed the equivalent of the courses above. Subjects similar to those enumerated in Course C, pursued with fuller investigation of literature of subject, special study of some region of economic importance and experimentation on specimens. A reading knowledge of French and German is required.

I—*Mineralogical Research.*

To be elected as (a) 10 hours or (b) 15 hours.

Hours to be arranged.

Professor CROOK.

For graduate students who have completed the requirements for major work in the department. Special investigation of the physical or chemical properties of some mineral or group of minerals, or work upon the rocks of some chosen region. A full knowledge of the literature of the subject is involved and ability to use French and German is necessary.

Major work: Ten year-hours, within which Geology A must be included.

MORAL AND SOCIAL PHILOSOPHY.

A—*Ethics. Social Philosophy.*

3 hours.

Mondays, Wednesdays, Fridays, 9.

Professor CALDWELL.

First Semester.—Ethics; analysis of the facts of conduct and of the moral development of humanity; the scientific explanation of conduct; the different views regarding the moral standard; the history of ethics with more special reference to modern times; the ethics of evolution and the ethics of idealism; the ethical movement of to-day; moral progress.

A chief feature of this course is class-room discussion, based upon the Lectures, upon Mackenzie's "Manual of Ethics," and upon the problems and difficulties of the members of the class.

Second Semester.—Social Philosophy. The problem of social philosophy and the principles of sociology, the nature of the social problem and of social science; the conclusions of anthropology and of the other sciences on which sociology rests; the theory of sociology by reference to the work of the leading social philosophers. Practical application of sociological principles to the chief social problems.

This course attempts to outline that application of science and philosophy to society and social problems which is such a characteristic tendency of to-day. And also to point out the main lines along which social advance may best be made.

Lectures, use of some serviceable manual, readings, reports, practical investigations.

There will be scope for discussion as in the first semester.

Open to students who have completed thirty hours.

B—*Practical Problems.*

2-3 hours.

Tuesdays, Thursdays, 3.

Credit will be given for time spent in investigation.

Professor CALDWELL.

Brief class-room study of some introductory, practical book. Investigation by students (under direction) of social conditions, problems, agencies, institutions. Intended to start students in the work of social observation and reflection.

Open to students who have completed thirty hours.

Second Semester.—Moral pathology and the science of character; class-room study and discussion of such books as Giles' "Moral Pathology," or Sidgwick's "Practical Ethics, MacCunn's "Making of Character." Reports and investigations of students upon topics.

Open to students who have completed thirty hours.

C—*Social Psychology.*

2-3 hours.

Tuesdays, Thursdays, 11.

Professor CALDWELL.

Consideration of the attempts of recent American and European philosophers and psychologists to approach the study of society from the psychological (as distinct from the hitherto prevailingly biological) point of view.

The logic and mind of society; the psychology of social action; the psychical factors in civilization; the relation of the social mind to the mind of the individual; the application of social psychology to education and reform.

Study of Professor Baldwin's "Social and Ethical Interpretations of Mental Development," and of Ross' "Social Control," with reference to the writings of others, such as Le Bon, Sidis, Ward, Bosanquet, Tarde, etc.

Second Semester.—Continuation of the work of the first semester.

Open to students who have had or are taking Course A, or who have had or who are taking Course A in psychology.

D—*Advanced Course.*

2 hours.

Hours to be arranged.

Professor CALDWELL.

First Semester.—Ethics. Reading and analysis of advanced works upon ethics, such as the writings of Plato, Aristotle, Kant, Hegel, Wundt, Gizycki, Paulsen, Sidgwick, Green, Spencer, Stephen, Martineau and others.

Lecture and study notes upon special topics such as the Metaphysic of Ethics, the Logic (methods) or Psychology of Ethics, the Art of Conduct, the Moral Ideal, Social or Political or Religious Ethics, etc. Or, study of special periods in the history of Ethical growth, or of Ethical speculation, such as the Ethics of the Greeks, or of German philosophers, etc.

Paulsen's "Ethics" may be used as a guide.

Second Semester.—Social Philosophy. Social theories of leading thinkers, ancient and modern. Tendencies in contemporary social philosophy ("English" and Foreign). The philosophy of social advance and of social reform.

Mackenzie's "Introduction to Social Philosophy" may be used as a guide.

Open to students who have completed Course A.

E—*Seminary.*

Professor CALDWELL.

Research study of topics connected with any of the above courses. Subjects can be announced only after consultation with those fitted for the work of investigators.

Time for meeting to be arranged. Credit, for undergraduates, 3-4 hours. For graduates as may be arranged.

RELATED COURSES IN OTHER DEPARTMENTS.

Philosophy A.	Latin, Cicero's Philosophical Works.
Political Economy A.	Greek, Plato.
History F, G.	Zoölogy A.

Major work: Ten year-hours, of which Philosophy A (second semester—*Psychology*) or three hours in Political Economy may form a part.

MUSIC.

A—*Harmony*. 2 hours.

Mondays, Wednesdays, 3.

Professor LUTKIN.

First Semester.—Intervals, Triads, Triad Harmonization with near Modulations, Inversions, Ear-training.

Second Semester.—Harmonization with addition of Dominant and Diminished Sept-chords, Modulations, Cadence Formulas, Dictation, Chord Sequences at piano.

B—*Harmony*. 2 hours.

Mondays, Thursdays, 11.

Professor LUTKIN.

First Semester. — Collateral Sept-chords, Suspensions Altered and Extended Chords, Tones foreign to the Harmony, Organ Point, Remote Modulations.

C—*Musical Form*. 2 hours.

Mondays, Thursdays, 11.

Professor LUTKIN.

Second Semester.—Composition of Melodies, Anglican Chants and Hymn Tunes; Song, Trio and Rondo Forms; Variations, Inventions and Suites, Sonata, Canon and Fugue.

D—*Counterpoint*. 2 hours.

Tuesdays, Fridays, 11.

Professor LUTKIN.

First Semester.—Two and Three Part Counterpoint.

Second Semester.—Three and Four Part Counterpoint, Canon, Two-part Fugues.

E—*Counterpoint*. 1 hour.

Hour to be arranged.

Professor LUTKIN.

First Semester.—Counterpoint in five and more parts.

Second Semester.—Double and Triple Counterpoint, Imitation, Figured Chorals.

F—*Canon and Fugue.*

1 hour.

Hour to be arranged.

Professor LUTKIN.

Canons in the various intervals, by Inversion, Diminution, Augmentation, Retrogression, etc. Tonal and Real Fugues in two to five parts, Double Fugues.

G—*Musical History.*

2 hours.

Tuesdays, Thursdays, 3.

Professor SADIE E. COE.

First Semester.—Primitive Music, Music of China, Japan, Africa, India and the American Indians, with illustrations; the Greek Music System, Early Ecclesiastical Styles, Polyphonic Music of the Middle Ages, History of Notation, Analysis of the Instruments of the Orchestra, Biographies of Noted Musicians.

Text-book work supplemented by lectures.

Second Semester.—Development of the Oratorio, Illustrations from Cavaliere, Mazzochi, Carissimi, Scarlatti, Stradella; Critical Analysis from Scores of Händel's "Messiah."

Development of the Opera, the Camerata, Caccini, Lully, Purcell, Comparison of Opera of Italy, France and Germany.

Critical Analyses from the scores of Wagner's Music Dramas, including the "Rheingold," "Walkyrie," "Siegfried," "Götterdämmerung," "Meistersinger" and "Parsifal."

H—*Sight-reading and Choral Practice.*

Mondays, Thursdays, 4:15 (half-hour periods, no credit).

Mr. COZINE.

I—*Analysis.*

1 hour.

Wednesdays, 11. (No credit.)

First Semester.—Bach's Inventions, Song Forms (principally Mendelssohn and Chopin).

Second Semester.—Fugues (Bach's Well-tempered Clavichord), Sonatas (Mozart, Haydn, Beethoven).

K—*Advanced Harmony.*

1 hour.

Thursdays, 3.

Professor LUTKIN.

Modern Harmony, Chromatic Alterations, Irregular Resolutions and Free Use of Dissonances.

L—*Advanced Analysis.* 1 hour.

Hour to be arranged.

Professor LUTKIN.

First Semester.—Sonatas and Fugues.

Second Semester.—Symphonies.

M—*Free Composition.* 1 hour.

Hour to be arranged.

Professor LUTKIN.

First Semester.—Homophonic Forms.

Second Semester.—Sonata Forms.

N—*Instrumentation.* 1 hour.

Hour to be arranged.

Professor LUTKIN.

O—*Voice Culture in Classes.* 1 hour.

Hour to be arranged. (No credit.)

Mr. COZINE.

NOTE.—Course H (Sight-reading and Choral Practice) is open to University students upon payment of a semester fee of three dollars, and Course O (Voice Culture in Classes) upon payment of a semester fee of ten dollars.

SCHOOL OF MUSIC.

The attention of students is called to the Evanston Musical Club, the St. Cecilia Choir of women's voices, the School of Music Maennerchor, and the chapel choir, as offering excellent opportunities for drill and improvement in vocal music. Also to the School of Music Orchestra and the University Band as offering similar advantages to those playing instruments. Frequent concerts, recitals, and lectures are given at Music Hall in connection with the regular courses in the School of Music, to which University students are granted free admission. The Circular of Information of the School of Music gives full particulars in regard to that Department.

NORWEGIAN-DANISH.

A—*Modern Norwegian-Danish Grammar.* 2 hours.

Hours to be arranged.

Dr. SIMONSEN.

First Semester.—Petersen's Norwegian Grammar and E. C. Otte's "How to Learn Danish" are the text-books used.

Second Semester.—Readings from Andersen and Ibsen.

PEDAGOGICS.

A—*History of Education.* 1-3 hours.

Mondays, Wednesdays, Fridays, 4.

Professor FISK.

Lectures readings, and discussions. Text-books: Compayré's History of Pedagogy, Quick's Essays on Educational Reformers, Gill's Systems of Education, Boone's Education in the United States.

Given in 1902-1903 and in alternate years.

NOTE.—This course may be taken as a three-hour course, or as a two-hour course (Mondays and Wednesdays,) or as a one-hour course (Fridays).

B—*Principles of Education.*

1-3 hours.

Mondays, Wednesdays, Fridays, 4.

Professor FISK.

Readings and discussions. Text-books: Compayré's Lectures on Pedagogy, Hinsdale's Art of Study, Herbart's Science of Education, Tompkins's Philosophy of School Management, Lange's Apperception.

Given in 1901-1902 and in alternate years.

NOTE.—This course may be taken as a three-hour course, or as a two-hour course (Mondays and Wednesdays), or as a one-hour course (Fridays).

C—*The Great Educators.*

2 hours.

Tuesdays, Thursdays, 10.

Assistant Professor SCOTT.

Lectures, readings, and discussions.

First Semester.—English Educators: Locke, Spencer.

Second Semester.—Continental Educators: Comenius, Herbart.

D—*The Great Educators.*

2 hours.

Tuesdays, Thursdays, 10.

Assistant Professor SCOTT.

First Semester.—Continental Educators: Rousseau, Pestalozzi, Froebel.

Second Semester.—The More Recent Educators.

In Courses C and D the best works of some of the most influential educators are read by each member of the class. The material thus read furnishes the basis for lectures, papers discussions and recitations.

Not to be given in 1902-1903.

E—*Seminary.*

2 hours.

Fridays, 5.

Professor FISK and Assistant Professor SCOTT.

Open to a limited number of advanced students. Students following this course teach elementary classes in the Academy four or five hours per week under the instructor in charge of the course.

Weekly conferences are held for reports and discussions. (The general subject for the year 1900-1901 has been "Methods in the Common School Branches," and an effort has been made to formulate the principles governing the proper teaching of these subjects.)

For Pedagogical Psychology see Philosophy I.

Major work: Ten year-hours, which shall include Pedagogics A or B (3 hours), C or D, Philosophy A, and two additional hours chosen from Pedagogy or Psychology.

PHILOSOPHY, PSYCHOLOGY AND LOGIC.

NOTE.—The alphabetical arrangement of the courses exists for convenience of reference,—not to indicate the order in which they should be chosen. It is generally best to elect A, or A and B conjointly, before the other courses, but either C or D or H may be taken in the same year as A.

A—*General Psychology; Logic.*

3 hours.

Mondays, Wednesdays, Fridays, 2.

Professor COE and Assistant Professor SCOTT.

First Semester.—Psychology. James's Psychology (Briefer Course); class-room demonstrations and guidance to private observation; demonstration of apparatus and methods of experimental psychology; written exercises from members of the class; optional work in the laboratory; lectures on various topics.

Second Semester.—Logic. An outline of both deductive and inductive logic. Special stress is laid upon the methods of the sciences. Written exercises in the detection of fallacies and the criticism of arguments. Creighton's Introductory Logic.

B—*Elementary Experimental Psychology.*

2 hours.

Hours (in the afternoon only) to be arranged.

Assistant Professor SCOTT.

Laboratory work in connection with Course A. Intended for students of general psychology who desire to become acquainted with laboratory methods, and for those who propose hereafter to pursue advanced laboratory courses. Two consecutive hours of laboratory work for one hour of credit.

C—*History of Philosophy.*

2 hours.

Tuesdays, Thursdays, 8.

Professor COE.

Text-book, lectures, dissertations, the reading of selected writings of Descartes, Spinoza, Leibnitz, Locke, Berkeley, Hume and Kant.

Open to students who have completed thirty hours.

D—*General Introduction to Philosophy; Popular Discussions in Philosophy.*

2 hours.

Tuesdays, Thursdays, 9. (Subject to change at request of class.)

Professor COE.

First Semester.—General Introduction to Philosophy. Lectures, papers and discussions. Intended for all who desire to learn about the nature of Philosophy, its divisions, and the characteristic attempts to solve its problems.

Second Semester.—Popular Discussions in Philosophy. Lectures, papers and discussions, all bearing upon the relation of philosophy to the life of our day, particularly to its science, its literature, and its social and religious aspirations.

Open to students who have completed thirty hours.

(To be given in 1902-1903. Not given in 1901-1902.)

E—*Philosophy of Religion.*

1 hour.

Mondays, 4.

Professor COE.

Lectures and assigned reading. No preceding study of philosophy is required for admission to this course, but each of the courses designated A, B, C, or D furnishes helpful preparation. Credit is not given until the work of both semesters is completed.

F—*Seminary in the Psychology and Philosophy of Religion.*

2 hours.

Tuesdays, 2-4. (Subject to change at request of class.)

Professor COE.

Reading of the chief literature on the Psychology of Religion; collection and analysis of new data; a study of the principles of Religious Pedagogy; psychological prolegomena

to the Philosophy of Religion. An introduction to research in the Psychology of Religion.

Open to students who have completed general psychology.

G—*Advanced Experimental Psychology.* 2 hours.

Hours (in the afternoon only) to be arranged.

Assistant Professor SCOTT.

This course extends the work begun in Course B into some of the more difficult problems, and introduces a limited amount of research. Two consecutive hours of laboratory work will be required for one hour's credit.

Open to students who have completed Course B.

H—*Pedagogical Psychology.* 2 hours.

Tuesdays, Thursdays, 2.

Assistant Professor SCOTT.

To be given yearly beginning with 1902-1903.

Open to students who have taken or are taking General Psychology.

J—*The Philosophy of Nature.* 2 hours.

Professor COE.

A brief review of Ancient and Modern Cosmologies, followed by an analysis of the chief notions of the Natural and Physical Sciences (such as law, matter, energy, life, mind), with especial reference to the theory of evolution and man's place in nature. Lectures, papers, discussions.

Open to students who have completed either A, C, or D.

(Given for the first time in 1901-1902. Not to be given in 1902-1903.)

K—*Advanced History of Philosophy.* 2 hours.

Hours to be arranged.

Professor COE.

Rapid reading of important philosophical literature. The period or group of writers to be studied will be chosen from year to year according to circumstances. In addition to the reading required of the whole class, each member will make a critical study of some problem or piece of literature, and present the results in the form of a thesis.

Open to students who have completed Courses A and C.

Major work in Philosophy: Courses A, C, E, and four addi-

tional year-hours, of which one may be in Ethics. Students who select Philosophy as their Major Subject will do well to take Course A in their second year.

RELATED COURSES IN OTHER DEPARTMENTS.

The department of Moral and Social Philosophy gives courses in Ethics and Social Philosophy; the department of Greek, courses in Plato's *Gorgias* and *Republic*; the department of Latin, a course in *Lucretius*; the department of Zoölogy, a course on the Central Nervous System and its Terminal Organs; the department of Pedagogy, courses on the Great Educators, including Locke, Herbart, Spencer, etc.

PHYSICS.

A—*General Physics.* 4 hours.

Lectures on Mondays, Wednesdays, Fridays, 11.

See below for Laboratory hours.

Dr. TATNALL.

First Semester.—General properties of Matter, Sound, Heat.

Second Semester.—Electricity, Magnetism, Light.

Each week's work consists of two experimental lectures. one recitation, and one laboratory exercise. Ames's Theory of Physics will be used as a text-book.

This course is intended for beginners. It requires no mathematics beyond that necessary for entrance. It is recommended as a first-year or second-year study to those contemplating the pursuit of any pure science, engineering, or medicine.

B—*Experimental Physics.* 4 hours.

Lectures, Tuesdays, Thursdays, 11.

See below for Laboratory hours.

Professor CREW and Dr. TATNALL.

First Semester.—Mechanics and Heat. An experimental study of Forces, Moments of Force, Moments of Inertia, Elasticity, Heat Measurements, Thermodynamics, etc., forming an introduction to advanced Physics. Worthington's Dynamics of Rotation represents the ground covered in mechanics.

Second Semester.—Light. An experimental study of the general phenomena of Refraction, Diffraction and Polarization. Spectroscopy. Photographic and micrometric study of various spectra, preceded by a special study of the spectrometer.

Application of the principles of Diffraction and Interference to the Grating, the Telescope, and other optical instruments.

Each week's work consists of two lectures and two laboratory exercises.

For students who have completed Course A, or equivalent.

C—*Experimental Physics.*

4 hours.

Lectures, Mondays, Fridays, 8.

See below for Laboratory hours.

Professor CREW.

Electricity and Magnetism. Two lectures and two laboratory exercises each week. In the lectures the more general laws of electricity and magnetism are discussed; the practical equations employed in the laboratory are also derived and discussed. J. J. Thomson's *Elements of the Mathematical Theory of Electricity and Magnetism* is employed as a text-book.

Henderson's *Practical Electricity and Magnetism* represents the ground covered in the laboratory. This course forms a solid foundation for all work in electrical engineering.

For students who have completed Course A, or equivalent.

D—*Thermodynamics.*

2 hours.

(Primarily for Graduates).

Mondays, Fridays, 9.

Professor CREW.

The first semester is devoted to the general theory of thermodynamics as set forth in Buckingham's *Theory of Thermodynamics*. In the second semester the application of thermodynamics to the steam engine is considered. The treatment of Ewing in his *Steam Engines and Other Heat Engines* will be followed. This course is intended as an introduction to mathematical physics, physical chemistry, and engineering. An elementary knowledge of the differential calculus is necessary.

F—*Mathematical Theory of Electricity and Magnetism.*

2 hours.

(For Graduates.)

Tuesdays, Thursdays, 8.

Webster's *Theory of Electricity and Magnetism* represents the ground covered. The subject is believed to be essential to all advanced students of pure physics and those contemplating

electrical engineering of high grade. It is also recommended to students interested in applied mathematics.

G—*Mechanical Drawing.*

2 hours.

Mondays, Wednesdays, 2-5.

Associate Professor BASQUIN.

First Semester: Elementary Mechanical Drawing. Text-book: Reid's Mechanical Drawing.

Second Semester.—Elementary Machine design. Text-book: Reid's Mechanical Drawing and Elementary Machine Design.

This course furnishes a good working knowledge of Mechanical Drawing as applied to machines, and is equivalent to the first year's work in drawing in engineering schools.

H—*Applied Mechanics.*

4 hours.

Tuesdays, Wednesdays, Thursdays, Fridays, 10.

Associate Professor BASQUIN.

The general application of mechanical principles to engineering problems. Particular attention is given to Work and Power, Flexure and Safe Loading of Columns and Girders, Graphical Statics, and Hydrodynamics. The work covers the courses generally known as *Strength of Materials* and *Hydraulics*. An elementary knowledge of Calculus is required. Text-Book: Church's Mechanics of Engineering.

K—*Shopwork.*

2 hours.

Tuesdays, Thursdays, 2-5.

Associate Professor BASQUIN and Mr. STARKWEATHER.

First Semester.—Bench Work in Wood and Wood Turning. Text-Books: Goss's Bench Work in Wood, Golden's Wood Turning.

Second Semester.—Metal Work, being a set of regular exercises in work on vise, lathe, drill press and shaper, with notes and lectures.

L—*Kinematics of Machinery.*

2 hours.

Mondays 10-12, Wednesdays 11.

Associate Professor BASQUIN.

Recitations and Drawings. Barr's Kinematics of Machinery.

Major work: ten year-hours.

LABORATORY HOURS.

The Physical Laboratory will be open each afternoon in the week except on Saturday. Students may select their own afternoons for work; but having once made a selection this must be strictly adhered to throughout the entire semester.

PHYSICAL CULTURE AND HYGIENE.

A—*Physical Culture and Hygiene.* 1 hour.
Tuesdays, 2.

Dr. HOLLISTER.

First Semester.—Lectures will be given upon structure and functions of muscles, nerves, spinal cord, and brain; sources and effects of vital heat and carbonic acid; fatigue; breathlessness; stiffness; overwork; training; effects of exercise upon organs and tissues of the body; gymnastic exercises—German, English, and Swedish systems; apparatus; indoor and outdoor games.

Second Semester—Lectures will be given upon diet and value of different articles of food; digestion; functions and care of skin, hair, nails, care of teeth and eyes; of composition air and water; ventilation; bacteria; infectious and contagious diseases.

B—*Physical Training.* 1 hour.
Hours to be arranged.

Dr. HOLLISTER.

Physical examinations will be given. Regular classes for dumb-bell and Indian-club exercises will be formed. Credit for one semester-hour will be given for three hours a week of gymnasium practice between December 1st and April 1st of the following year.

ECONOMICS, FINANCE, ADMINISTRATION, AND
SOCIOLOGY.

GENERAL STATEMENT.

Courses A, C and G in Economics require no introductory course, and any two of them may be taken together; but those who desire to take advanced courses in the subject should take Course A as a first course. Course F is supplementary to Course C and should be taken with that course. Those wishing to make a major in this department (ten year-hours) should begin the work in their second year in

college; but no student will be admitted to any of the courses until he has thirty hours of college credit, except by special permission of the instructor in charge. Those desiring to specialize in Economics should have a good knowledge of general history, which may be gained in Course AB in History. History BC is recommended for those who take Economics D or H, History CD for those who take Economics B, and History G for those who take Economics C.

A—(1) *Economic Theory* and (2) *The Economics of Transportation*. 3 hours.

Mondays, Wednesdays, Fridays, 10.

Professor GRAY and Assistant Professor GEORGE.

First Semester.—An introductory and elementary course in Economic Theory. Recitations, lectures and frequent written tests.

Course A furnishes the best preparation for the advanced courses offered in the department.

Walker's Political Economy (advanced course) is used as a text.

Second Semester.—Transportation. An elementary course in the theory and history of transportation. The modern era of turnpikes and canals. The development of the railroad, including the organization, management and consolidation of corporations, the question of rates and of public control, state and federal. The railroad as a prime factor in the development of commerce and industry. Hadley's Railroad Transportation and the Reports of the Interstate Commerce Commission are used as guides.

B—*Administration*. 2 hours.

Wednesdays, Fridays, 8.

Professor GRAY.

A course in administrative law and the comparative theory and history of administration of the leading modern nations. The course will treat of the general field of administrative study and the nature of administrative law, the comparative central administration of the leading countries, together with a study of the legal relations existing between the different organs of administration. Special attention will be paid to the organization and functions of the diplomatic and consular services of the different countries, and to the civil service reform movement in the United States. Questions of local administration, with special reference to the organization and administration of cities in the chief modern countries. The separation of local and central functions, and

the possibility of exercising an administrative rather than a legislative control over the local governments receive special consideration.

Goodnow's Comparative Administrative Law is used as the chief guide. Frequent references are made to the decisions of the courts on administrative matters.

C—*Industrial and Commercial History.*

3 hours.

Mondays, Wednesdays, Fridays, 11.

Professor GRAY.

The Industrial and Commercial History of Western Europe and America since the middle of the eighteenth century. The effects of modern inventions and political changes on trade and industry. The economic effects of the formation of the *Zollverein*, the adoption of Free Trade by England, the discovery of gold in California and Australia, the American Civil War, and the rapid extension and consolidation of the means of transportation. The effects of political changes in establishing new lines of trade and new centers of industry. The Spanish-American War, the increased supply of gold within the last decade and the effects of concentration in the control of industry receive special attention. The course is conducted by lectures, with prescribed topical readings. One written report of considerable length is required each semester.

Course C requires no previous training in Economics.

D—*Finance; Money and Banking.*

3 hours.

Mondays, Wednesdays, Fridays, 9.

Assistant Professor GEORGE.

First Semester.—*Public Finance*, with especial reference to modern systems of taxation. Objects and methods of public expenditure; equilibrium of the budget; public loans; the relation of public financiering to private economy. In taxation a comparative study is made of the various systems in leading modern countries; and in the United States, the relation between existing methods of taxation and the present industrial organization is given especial attention.

Second Semester.—*Money and Banking*. The evolution of money; the standards of various countries, together with an historical survey of the different kinds of money used in the United States; banking functions in the modern business world; clearing houses and systems of credit, and their

relation to the trade and industry of the country, receive especial consideration.

The work is conducted by lectures and discussions. Frequent brief written reports on selected topics are required. During the first semester Adams's Science of Finance is used, and during the second semester Dunbar's Theory and History of Banking and the report of the Monetary Commission serve as guides. The class-room work of the second semester is supplemented by visits to some of the great commercial institutions in Chicago, such as the Chicago Board of Trade, the Chicago Clearing House, and leading banking establishments. For requirements of admission see the general statement preceding the announcement of Course A.

E—*Seminary.*

3 to 6 hours.

Tuesdays, 2-4 (October 1 to May 1).

Professor GRAY and Assistant Professor GEORGE.

The seminary is open to graduates and to a limited number of undergraduates who seem to the instructors prepared to make original investigations. No one will be allowed to register for less than three hours per week *throughout the year* in this course. An undergraduate requires the vote of the Faculty in order to register for more than three hours.

Room 20 in the Library building, containing a considerable library and a table with lock-drawer for each student, is set apart for the exclusive use of the members of this seminary.

Subjects for investigation can be definitely announced only after consultation with those who expect to take the work, the greatest liberty of choice being allowed each student.

The subjects for the year 1901-1902 were: "Trusts, or Industrial Combinations in the United States. Their Development, Present Status, and Probable Future," and "Some recent Developments in Fire Insurance." For the year 1902-1903, the following subjects are suggested: "A Study of Some Phases of Life Insurance," and "The Growth and Development of the Building Trades Organizations of Chicago."

F—*Commercial Geography and International Trade.* 1 hour.

Mondays, 8.

Professor GRAY.

A general survey of modern commerce. The mechanism, organization and instruments of international trade; the factors determining the values of commodities: the points of origin and methods of producing and preparing for the market

and transporting the more important articles entering into the commerce between nations: the relation of the government and of centers of production to national commercial supremacy.

Chisholm's Hand Book of Commercial Geography is used in connection with government publications on trade and industry.

Course F is supplementary to Course C and may well be taken in connection with it.

No credit will be given in Course F until the work of the year is completed.

G—*The Labor Question in Europe and the United States.*

3 hours.

Mondays, Wednesdays, Fridays, 8.

Assistant Professor GEORGE.

The purpose of this course is to acquaint the student with the economic condition of the working-classes in Europe and the United States and to discuss the relation of labor organizations to capital in the production and distribution of wealth. There is a careful study of the rise and growth of labor organizations, and of the fiscal and industrial organization of capital; the development of the labor contract, and of collective bargaining; state and private efforts for the prevention and the adjustment of industrial disputes; methods of industrial remuneration; the shorter working day; workingmen's insurance; employers' liability and compulsory compensation acts; provident institutions, such as savings banks, friendly societies, and fraternal benefit orders; and the problem of the unemployed.

Lectures, discussions, and a systematic course of prescribed reading; one written report on a selected topic each semester.

During the year excursions are made to some of the leading factories and to representative tenement-house and sweat-shop districts in Chicago.

Course G requires no previous training in Economics.

H—*Financial and Tariff History of the United States.* 2 hours.

Tuesdays, Thursdays, 8.

Assistant Professor GEORGE.

FIRST SEMESTER.

The Financial History of the United States. A comprehensive review is made of the subject from 1789 to the present time, with special study of Hamilton's financial system, the struggle concerning the second Bank of the United States, and the

finances of the Civil War and of the period of suspended payments.

Bolles' Financial History, 1789-1860, and Noyes' Thirty Years of American Finance are used as guides. The leading acts of Congress upon financial subjects receive careful attention, and selected topics for investigation are assigned.

SECOND SEMESTER.

The Tariff History of the United States. The economic condition of the country prior to the Revolution, and the commercial relations of the colonies to the mother country are discussed. Then a study is made of the successive tariff acts and their influence upon domestic industry and upon commerce and international trade. Especial emphasis is laid upon the period following the Civil War, and careful consideration will be given to the more recent development of the subject as a result of the Spanish-American war.

Taussig's Tariff History of the United States and Taussig's State Papers and Speeches on the Tariff are used as general texts. Other reading from various writers is prescribed and the investigation of selected topics is required.

Lectures and discussions.

Major Work: Ten year-hours.

Sociology. For courses in this subject see Moral and Social Philosophy.

Courses Preparing for Business and for the Public Service.

Special attention is called to the following program of studies, which is recommended for those who desire to prepare for a business career or for a career in the public service.

FIRST YEAR.

English Language A,
Mathematics A or AB,
Foreign Languages.

SECOND YEAR.

Foreign Languages,
Chemistry A, or
Geology A, or
Physics A,
History AB,
Economics A.

THIRD YEAR.

English Literature A,
Philosophy E,
Sociology,
History BC or G,
Economics C, F, G.

FOURTH YEAR.

Geology B, Seminary.
History CD, H.
Economics B,
" D,
" H.

The above order is not the only one in which the studies may be taken; it may be varied, especially in the third and fourth years, and some modifications may be made in the program to accommodate the special needs of individual students. Courses A, C, and G in Economics are general courses. Courses D, F, and H are more intensive and offer special advantages for those preparing for a business or commercial pursuit, while Course B (Administration) and Course H in History are especially valuable for those who wish to prepare for the public service. The Seminary Course offers to advanced students opportunity for original and detailed investigation of special subjects. Students should secure a ready command of the German, French, and Spanish languages.

In addition to the advantages offered in this program of studies students have the advantage of public lectures delivered at the University by representative men of practical experience in the commercial world and in public administration. During the year 1901-1902 the following course was given:

Hon. CHARLES G. DAWES,

Ex-Comptroller of the Currency.

"National Banks and their Functions in the Community."

Dr. A. O. ELIASON,

Banker, and Special Lecturer on Banking at the University of Minnesota.

"The Development of Commercial Banking in a new Community."

Mr. WM. G. HOAG,

Cashier State Bank of Evanston.

"Bank Collections and Exchanges."

Mr. CLARENCE S. PELLET,

Ex-President Chicago Fire Underwriters' Association.

"Fire Insurance in its Public Aspects."

Mr. ALEXANDER H. REVELL,

Merchant, Chicago.

"Hedging for a Panic."

Mr. A. W. SULLIVAN,

Assistant Second Vice-President Illinois Central Railroad.

"Railroad Management and Operation."

For the year 1902-1903 a course covering a wider range of subjects will be provided.

RELIGIONS.

- A—*Comparative Religions and History of Christian Missions.* 2 hours.
 First Semester.—Wednesdays and Fridays, 11.

Professor LITTLE.

For *Philosophy of Religion*, see Philosophy E.
 For *Bible Study*, see courses under that heading.
 For *Greek New Testament*, see under Greek.
 For *Hebrew Old Testament*, see under Hebrew.
 For *History of the Christian Church*, see under History.

SPANISH.

- A—*Elementary Spanish.* 3 hours.
 Mondays, Wednesdays, Fridays, 9.

Miss FREEMAN.

General elective, but especially adapted to advanced students in French. The aim of the course will be the acquisition of the power of intelligent reading. It is expected that advanced students will make the same progress as in the elementary year in French. The courses in Italian and Spanish are given alternately. Spanish will be given in 1902-1903.

Edgren's Grammar; Reader (Ramsey); *Partir á Tiempo* (Larra). *Ó Locura Ó Santidad* (Echegaray).

Composition; *Doña Perfecta* (Galdos). *Un Drama Nuevo* (Estebanez). *La Familia de Alvareda* (Caballero). *El sí de las Niñas* (Moratín). *José* (Valdes).

Lectures on the Historical Development of the Spanish language, and on Modern Authors.

SWEDISH.

- A—*Swedish.* 3 hours.
 Hours to be arranged.

Professor ERICSON.

First Semester.—Modern Swedish Grammar and the Reading of Prose Selections.

Text used: May's Swedish Grammar.

Second Semester.—Tegner's Frithjof's Saga and Selections from Kuneberg.

ZOÖLOGY.

- A—*General Biology.* 4 hours.
 Lectures, Tuesdays, Thursdays, 9. Laboratory hours

to be arranged between 9 and 12 Tuesdays, Wednesdays, Thursdays, Fridays.

Professor LOCY and assistant.

A comparative study of living organisms as a whole, forming an introduction to the study of vital activities. In the laboratory the student acquires a knowledge of methods of study, and is taught to observe, to verify and record his observations. A general survey of the properties of living matter is followed by study of a few selected types of invertebrate animals, beginning with the simplest and proceeding to the more complex. Parker's "Elementary Biology" and Marshall and Hurst's "Practical Zoölogy" are used as handbooks, and these are supplemented by lectures. In the lectures the physiological side receives most attention.

During the second semester a large part of the time is devoted to study of the development of animals, using eggs of fishes, amphibia and the chick. This course is open to all students, and is required of those intending to take either Botany or Zoölogy as a major subject. A knowledge of elementary physics and chemistry is very desirable for all students entering this or any of the following courses.

C—*Cytology and Histology.*

3 hours.

Lectures or recitations Mondays, 9. Laboratory hours to be arranged.

Dr. HILL.

First Semester.—Cell-Life and Elementary Histology. Anatomy and physiology of the cell, microscopical structure of the elementary animal tissues, and principles and practice of the general methods of microscopical technique. Wilson's "The Cell in Development and Inheritance" forms the basis of the work on the cell.

Second Semester.—Microscopical Structure of the Animal Organs. Principles and practice of the important special methods of microscopical technique. Continuation of work of first semester. Böhm-Davidoff's "Text-book of Histology" and Piersol's "Normal Histology" will be used as reference books.

D—*Comparative Anatomy and Physiology of Vertebrates.*

4 hours.

Lectures, Wednesdays, Fridays, 9. Laboratory work to be arranged on Tuesdays, Wednesdays, Thursdays, Fridays, 9-12.

Professor LOCY and Assistant.

First Semester.—Comparative Anatomy. Study of Selected Vertebrate Types. The recitations and lectures will be based on Wiedersheim's "Comparative Anatomy of Vertebrates."

Second Semester.—Vertebrate Embryology. Lectures and laboratory work.

NOTE.—In alternate years, the work of the second semester will be in Physiology instead of Vertebrate Embryology as indicated above.

E^a—*The Central Nervous System and its Terminal Organs.*

1 hour.

Lecture, Tuesdays, 4. One hour, or accompanied with three hours' laboratory work, two hours.

Professor LOCY.

First Semester.—The Central Nervous System. Comparative Structure of the Central Nervous System, with discussions on some of its physiological activities.

Lectures and demonstrations, adapted to those taking, or about to take, Psychology, and to others who wish to become acquainted with the structure and general physiology of the nervous system.

Second Semester.—The Structure and Evolution of Sense Organs.

Given in 1902-1903 and in alternate years.

E^b—*Rise and Development of General Biology and Zoölogy.*

1 hour.

Tuesdays, 4.

Professor LOCY.

Historical lectures in which the rise and development of General Biology and Zoölogy is traced from the renascence of science to the present. Particular attention is given to the beginning, the growth, and modification of fundamental doctrines and principles that have become fruitful in the Nineteenth Century. Intended primarily for students taking Zoölogy A or other work in the department. The course is also open to students who have pursued elementary work in General Biology.

Given in 1903-1904 and in alternate years.

F—*Topics of Investigation.*

May be elected as (a) five hours or (b) ten hours. Hours to be arranged with the instructor.

Professor LOCY.

Open to students who have completed two years' work in Zoölogy. Problems of limited extent are assigned after consultation with the professor in charge, and worked out under his direction with such help as is required. This forms an introduction to the work of original research. The completion of the course involves the consultation of the literature bearing on the problem in hand, and the preparation of a thesis embodying the results of the investigation. A reading familiarity with French and German is essential for entering this course.

G—*Research Work.*

May be elected as (a) ten hours or (b) fifteen hours.
Hours to be arranged with the instructor.

Professor LOCY.

For graduate students who have completed the equivalent of the courses described above. Similar to Course F, but with broader scope and more rigid requirements as to the thesis, which must embody a critical review of the principal literature and substantial conclusions based upon the personal work of the student. Offered to students who are candidates for a graduate degree. Means of publication will be found for all papers which are worthy of it.

Major work: Ten year-hours.

ELECTIVES.

In making up his quota of time from elective work, the student's choice of such courses as are open to him is subject to the regulations of each department.

At a date not later than the registration at the beginning of the third year, every candidate for the Bachelor's degree must elect at least one department in which to do *major work*. The specific courses constituting *major work* will be found mentioned under each department. They will involve about ten year-hours given to work in the department, and distributed over at least two years of the general program. The election of the department for *major work* will enter into the registration of the third year, and the professor at the head of the department becomes the student's adviser thereafter.

Students are advised to give careful thought to the planning of their elective work as early as the beginning

of the second year. They may find it much to their advantage to devote the whole, or a large part, of their elective time in the second year to the *major subject*. The privilege of elective work will be made more profitable to the student by adhering consistently to a plan adopted for the year, rather than by changing it, in the hope of improvement, after it is begun.

COURSE OF STUDY IN ENGINEERING.

The following program of college studies is offered to candidates for the degree of Bachelor of Science who intend to enter the profession of Engineering. In addition to the courses prescribed for the degree of Bachelor of Science, the program includes the fundamental engineering studies. The completion of the program will reduce the time usually spent in an engineering school to two years; or it will enable a student to enter immediately upon practical engineering work.

A PROGRAM OF STUDIES IN ENGINEERING, WITH NUMEROUS ELECTIVES.

SUBJECTS.

FIRST YEAR.			DEPARTMENT.		COURSE. CREDITS.		
DEPARTMENT.	COURSE.	CREDITS.					
*English Language	A	3	Economics	----	A	3	
*Mathematics	AB	5	or Geology	----	A	3	
*German	A	4	*Physics	----	B	4	
or French	A	4	*Economics	----	C	3	
*Chemistry	A	4	or Mineralogy	----	A	3	
			*Mathematics	----	J	3	
			*Physics	----	K	2	
			*Philosophy	----	E	1	
SECOND YEAR.							
English Literature	B	2					
*Mathematics	BB	3					
German	A	4					
or *French	A	4					
*Physics	A	4					
History	BC	2					
*Mathematics	L	2					
History	C	2					
*Physics	G	2					
THIRD YEAR.							
Economics	F	1					
*English Literature	A	2					

FOURTH YEAR.

*Physics	C	4
*Physics	D	2
English Language	B	2
or Mathematics	D	2
*Physics	H	4
*Physics	L	2
Geology	B	2
Mineralogy	C	2
Philosophy	A	3
Mineralogy	E	2

NOTE.—The courses marked thus (*) are particularly recommended and include all the courses prescribed for the B. S. degree.

PROFESSIONAL STUDIES.

In some of the subjects taught in the College of Liberal Arts the instruction is so nearly identical with that given in the professional schools that students, by making a proper choice of electives, may qualify themselves for advanced standing in those schools. Students entering the Law or Medical school with this advanced credit may, by taking extra studies, reduce by one year the time required for earning both the collegiate and professional degrees. The same end may be attained while the student is enrolled in the College of Liberal Arts, by the election of permitted work in the professional schools.

The following detailed statement is made respecting combined courses in collegiate and professional studies:

Collegiate and Medical Studies. Students intending to enter the Medical School and desiring to shorten the time required for the degrees in Arts and in Medicine, can accomplish this result by spending four years in the College of Liberal Arts and electing the following courses: Chemistry A and B, Physics A, Zoölogy A, C, D, and E. Or such students, if they have secured one hundred semester-hours of credit at the end of their third year in the College of Liberal Arts, and have included therein all the prescribed studies listed for their degree, may enter the Medical School at the beginning of the next year.

Collegiate and Law Studies. Students desiring to shorten the time required for the degrees in Arts and in Law, or the period of study required for admission to the bar, should elect the following courses offered in the College of Liberal Arts: Political Economy B, and History B, C, and H. Those taking all these courses may obtain advanced standing in the Law School of this University, and are also entitled to a certificate, which in some states will be accepted as counting a year in the period of study required of all candidates for the bar. Or such students, if they have secured one hundred semester-hours of credit at the end of their third year in the College of Liberal Arts, and have included therein all the prescribed studies listed for their degree, may enter the Law School at the beginning of the next year.

Collegiate and Theological Studies. Students who contemplate the study of Theology after graduation are advised, during their undergraduate course, to make themselves proficient in Greek, Latin, and German. They should also elect Philosophy A and B, as well as Moral Philosophy A.

In the Garrett Biblical Institute they can shorten by one year the time required for the degree of Bachelor of Divinity by obtaining credit during their undergraduate course in the College of Liberal Arts for the following subjects: Hebrew A and B, Greek N, and History L.

Credit for studies pursued in the professional schools is restricted to work done in schools of this University; and the time spent in these schools cannot be credited toward the one year of residence required in the College of Liberal Arts of all candidates for a degree. In no case can more than twenty semester-hours be credited for work done in the professional schools; neither can credit be thus granted for any subject for which the student has previously obtained credit in whole or in part in this college.

Under conditions elsewhere stated, students having a Bachelor's degree, who are enrolled in some one of the professional schools, may become candidates for the Master's degree while pursuing professional study. (See p. 135.)

GRADUATE WORK.

Certain advanced courses of instruction are offered in the College of Liberal Arts to graduate students. This work has not as yet been organized into a distinct graduate school. The conditions under which students may be registered for graduate work are elsewhere stated (see p. 132), as are the terms under which the advanced degrees may be conferred (see p. 135).

Students desiring to enter upon graduate work are advised to consult or correspond with the chairman of the Committee on Graduate Study, Professor Henry Crew.

The progress of candidates for advanced degrees will be tested from time to time by the instructors in charge, who will report thereon to the Faculty at least once a semester.

REGISTRATION.

Undergraduate Registration. Every undergraduate student is required to present himself for registration at the office of the Registrar, University Hall, and to complete his registra-

tion by the evening of the first Thursday of each semester. The following are the rules governing the registration of undergraduates.

1. Registration days are the first Monday, Tuesday, Wednesday, and Thursday of the semester.

2. On the registration days of the first semester the student must register for the work of the whole year. He is expected to continue throughout the year the work then registered for, and may not change it without special permission from the Registration Committee.

3. Before completing their registration, students are required to consult their Faculty advisers as to their college work.

4. No college credit can be obtained for class work not regularly registered.

5. Every student must register for fifteen hours of work a week, unless permission has been obtained from the Registration Committee to register for less or more. Permission to register for more is a privilege, and will not be granted unless the committee is satisfied the student can carry the whole work creditably. Two hours of laboratory work are credited as one hour.

6. All undergraduates shall state upon their registration papers the full amount of work which they propose to undertake each semester, whether in the College of Liberal Arts or elsewhere, indicating the number of hours to be devoted to each subject, and the school or department in which it is proposed to do such work.

7. All students of the College of Liberal Arts desiring to take work in any other department of the University must first obtain formal consent from the Faculty of the College of Liberal Arts and also from the Faculty of the department concerned, and must file such consent with the Registrar prior to undertaking the work. Failure to comply with this regulation will be deemed sufficient cause for the cancellation of the entire registration of the student concerned.

8. No one will be entered as a candidate for a degree who has deficiencies in entrance work amounting to more than five hours a week through one year; and no student will be credited in the published lists of the catalogue with college work until these deficiencies are made up.

9. Required subjects take precedence in registration in the order of their requirement.

10. On the registration days of each semester all students must obtain from the Registrar vouchers for presentation at the Business Office of the University.

11. A fee of two dollars is charged for registration completed later than the appointed registration days.

Graduate Registration. Every graduate student, whether resident or non-resident, proposing to pursue advanced work, whether he intends to become a candidate for a degree or not, is required to register for this work in the office of the Registrar. The following are the rules governing such registration:

1. The registration of resident candidates for the Master's degree in Arts, Science, Philosophy, or Letters, must be effected not later than the first Monday in October next preceding the date of the final examination. In the case of non-resident candidates it must be effected one year earlier.

2. A student desiring to become a candidate for the Master's degree above mentioned, while enrolled in one of the professional schools of this University, must also register in the College of Liberal Arts, and is regarded, for this purpose, a resident candidate under Rule 1.

3. A student who does not become a candidate for the Master's degree until after graduation from one of the professional schools of this University, must register for the same as early as the first Monday in October next following the completion of the professional course.

4. The registration of a candidate for the Doctor's degree must be effected not later than the first Monday in October.

5. A candidate for an advanced degree, prior to his registration, must make written application for enrollment to the Registrar, and furnish to him all data required for due record of his application, together with a statement of the courses of study he proposes to pursue.

6. The above application and statement of courses must be approved by the Committee on Graduate Studies and the heads of departments under whom the work is to be taken, and such approval must be filed with the Registrar as a condition preliminary to registration.

7. Graduates of this, or any other college, who are not candidates for an advanced degree, may, with the consent of the departments concerned, register as resident students in such advanced studies as they are found prepared to pursue.

ABSENCES.

When, in any semester, the absences of a student in a single subject exceed one-eighth of the total number of

assigned exercises in that subject, he will be required to take, at the close of the semester, besides the regular examination, an *additional* examination in that subject on the last Friday of the semester.

Students absent from a required *additional* examination are held to take that examination at the next date set for it, and no credit can be given until the examination is passed.

When a student's absences in any study amount to one-sixth of the total requirement in that study, his registration in that subject will be canceled, and the privilege of examination denied. This rule is administered by the Committee on Records and Registration, which has power also to restore the canceled registration.

EXAMINATIONS.

At the close of each semester, *regular* examinations are held in the studies of the semester. Any student may be excluded from examination whose daily work has not been satisfactorily done.

A *second* examination is appointed for students who have been absent from any regular examination, or who have failed to receive passing grade of credit on a semester's work in any study. This examination will be held in the forenoon of the first Wednesday in the first semester, and of the first Monday and the Monday following Easter in the second semester. No student may take more than one second examination for the same item of credit.

Additional examinations to make up work which has been lost by excess of absence from class-work are appointed for the last Thursday of the first semester and the last Friday of the second semester.

Incomplete work, not made good before the close of the next succeeding semester, is recorded as *failed*.

Each student reported as *failed* in any study must make good the deficiency within nine months, or take the work again with the succeeding class in order to obtain credit for it.

Undergraduates are not allowed credit for work done *in*

absentia. Only those who have duly registered and regularly pursued their studies in their classes are admitted to examinations.

GRADES OF SCHOLARSHIP.

At the end of each semester the standing of a student in each of his courses is reported by the instructor to the Registrar and entered of record. The student's standing is expressed, according to his proficiency, by one of five grades, designated A, B, C, F, R. Grade A denotes excellent scholarship; grade B, good scholarship; grade C, poor scholarship; grade F, failure, making necessary a second examination; grade R, failure so serious that the work must be taken over in class. Grades A, B, and C count toward a degree; but no more than one-eighth of the work offered to meet requirements for graduation may be of grade C. One semester's work marked C may be counted toward graduation for each subsequent semester's work which is of higher grade in the same department; work marked C, not released by subsequent higher work in the same department, may be released by examination under the same regulations as apply to work marked grade F; the original mark, however, will remain in the record.

When a mark F is removed by a secondary examination, the work shall be recorded as grade C released.

The semester record of each undergraduate is sent by the Registrar to the student's father or guardian.

CLASSIFICATION.

For the purpose of listing in the catalogue, the names of undergraduates are placed alphabetically in two groups under the headings:—Candidates for the Bachelor's Degree, and Students not Candidates for a Degree. Opposite the name of each student in the first list are indicated the degree for which he is a candidate and the number of semester-hours of work already accomplished.

DEGREES.

Different lines of study lead to the degrees of Bachelor of Arts, Bachelor of Philosophy, Bachelor of Science, and Bachelor of Letters. The following regulations have been prescribed relating to the attainment of these degrees:

THE BACHELOR'S DEGREE.

1. A student in order to become a candidate for a Bachelor's degree must formally announce his intention by filing his petition with the Registrar, using for the purpose a form provided by the University. The petition must be filed on or before the last Saturday in May of the year next preceding the year in which the candidate expects to obtain the degree.

2. He must have pursued his studies, in residence, in the College of Liberal Arts of this University for at least one college year.

3. He must have completed all the courses prescribed for that particular degree, and such elective courses in addition as to have secured a total credit of one hundred and twenty semester-hours. The total credit obtained must include major work in at least one department.

4. In making up the total number of hours required for graduation, not more than one-eighth of the work done under this Faculty may be of the grade designated as C.

THE MASTER'S DEGREE.

The Masters' degrees are open to Bachelors of Arts, Philosophy, Science, or Letters of this University, or of any other institution of accepted grade. The following regulations have been prescribed:

1. Before being recommended for any Master's degree the student must have pursued his studies in residence in the College of Liberal Arts of this University for at least one year, except as stated below. The provision "in residence" requires regular attendance upon all prescribed lectures or other exercises in the courses which the candidate pursues. Such prescribed lectures and exercises will occur at least once a week in each course of instruction. Graduates of other institutions will not be admitted to the College of Liberal Arts as *non-resident* candidates for the master's degree.

2. Any Bachelor of this University may become a non-resident candidate for the corresponding Master's degree; but without residence a candidate cannot receive the degree earlier than two years after graduation.

3. Any Bachelor of this University, or of another institution of accepted grade, may become a candidate for the Master's degree while pursuing studies in the Medical, Law, or Theological schools of this University, or on the completion of the professional course.

4. The candidate must obtain credit in approved courses of study amounting to thirty semester-hours, unless he is enrolled in one of the professional schools above enumerated, or has graduated therefrom, in which case his credit must amount to twelve semester-hours of advanced work in an approved field of study, in addition to the completion of the maximum prescribed professional course. This advanced work may be taken either under the Faculty of Arts or the Faculty of the professional school, but in either case it must be approved by the Committee on Graduate Study of the College of Liberal Arts.

5. At least one-half of the work offered for the degree must be chosen from one or, at most, two departments of study in which the candidate has previously taken the undergraduate *major work*, or an equivalent.

6. The candidate must present a thesis on an approved topic pertaining to the primary subject. The subject of this thesis must be filed with the Registrar not later than the first Wednesday in December, the thesis itself must be filed as early as the Saturday immediately preceding the last Monday in April.

7. Candidates for the Bachelor's degree who during their undergraduate course devote their excess of time to the continuation of their major subject, or to such other advanced topics as may be approved by the Registration Committee, may have such work, if satisfactorily completed, credited toward the Master's degree. But in no case will the Master's degree be conferred in less than one year after the conferring of the Bachelor's degree.

8. A non-resident candidate will be required to make written report from time to time as to the progress of his work.

9. The final examination of candidates will take place at the University at an appointed date, which will be about May 20th.

THE DOCTOR'S DEGREE.

The degree of Doctor of Philosophy will be conferred under the following conditions:

1. The candidate must have received the Bachelor's degree from this institution, or from some other of accepted standing.

2. The degree may be conferred on successful candidates after three years of graduate study, of which at least two must be in residence. The last year, or the first two years, of the three required must be spent in residence at this University. The period of three

years may, however, be shortened in the case of students who, as undergraduates, have pursued special studies beyond the requirement for major work in the direction of their proposed graduate work. Study for any specified time will not be regarded as sufficient ground for conferring the degree. High attainments in scholarship and evidence of original investigation will be expected. "In residence" will be interpreted as defined under the requirements for the Master's degree.

3. Two-thirds of the candidate's time must be given to advanced work in some one department which shall constitute his primary subject. The remaining time must be given to either one or two secondary subjects. The requirement, "advanced work," will imply an amount of preliminary study in the given subject equivalent to at least the undergraduate "major work" of the department concerned.

A reading knowledge of French and German will be required, as a preliminary qualification. In exceptional cases an equivalent in Latin, Greek, or Hebrew may be accepted instead of French.

4. Every candidate must present a thesis upon an approved topic pertaining to his primary subject. The thesis must give evidence of original investigation. A revised type-written copy must be presented to the Registrar as early as the Saturday next preceding the last Monday in April. If the thesis is approved the candidate must, within such time as shall be designated, present twenty-five printed copies of it to the University Library. The final examination, which will be held about May 20th, will be both written and oral, and will cover the entire primary subject, including the topic of the thesis.

Each branch of the secondary subject may be completed whenever the candidate shall pass a written examination upon it.

The following joint requirements have been made by the College of Liberal Arts and Garrett Biblical Institute for the attainment of the degree of Doctor of Philosophy by students in theology:

1. The candidate for the degree of Ph. D. must have completed a Bachelor's course, the sufficiency of which has been accepted by a joint committee of the Faculty of the Institute and the Faculty of Liberal Arts.

2. He must have completed two full years of theological study, either in the Garrett Biblical Institute or in another theological school of recognized high standing.

3. He must be accepted as a candidate for the degree of Ph. D. by a vote of the Faculty of the Institute, and be registered as a can-

didate for such degree with the Registrar of the College of Liberal Arts; after which he must continue in residence at least two years, and complete the work of two full years. Of this work two-thirds must be taken in one department of the Institute—the department in which the candidate does his primary work. The remaining third may be taken in not more than two departments of the Institute, or of the graduate school of the College of Liberal Arts. The whole course of study selected will be subject to the approval of the Faculty of Liberal Arts, through its committee on Graduate Study. During the two years of his residence the candidate will be subject to the direction of the head of the department in which his primary work is taken.

Of the four years required as a *minimum* for the degree of Ph. D., three at least must be spent in residence at a theological school of high standing, and the last two at Garrett Biblical Institute.

4. A reading knowledge of French and German will be required as a preliminary qualification. In exceptional cases a reading knowledge of Latin, Hebrew, or Greek may be accepted in lieu of French, at the option of the Faculty of Liberal Arts.

5. *Thesis.* Each candidate must present a thesis prepared by him, upon some topic related to his primary subject. The thesis must give evidence of original investigation. A year prior to the final examination, the subject of the thesis must be approved by the professor under whom the primary work is performed, and three months before the final examination it must be submitted to him for criticism. After criticism it must be presented again in typewritten form, upon letter paper of a good quality, of the quarto size, with a margin of not less than one inch at the top, at the bottom, and on each side. If the thesis is approved the candidate must, within a time designated, present twenty-five printed copies to the University Library.

6. The final examination will be both written and oral, and will cover the entire primary subject, including the topic of the thesis. Each branch of the secondary subject may be completed whenever the candidate shall pass a satisfactory written examination upon it.

7. The College of Liberal Arts shall always be represented on the committees for examining theses and candidates.

8. Graduate students in the College of Liberal Arts will be admitted to the graduate courses in Garrett Biblical Institute free of charge for tuition or incidentals.

GOVERNMENT.

Students are temporary residents of the city, and as such are amenable to the laws of the state and the ordinances of

the city. They are also subject to the rules and regulations made by the Faculty. They are held to have a knowledge of the Statutes of the University and of all Faculty requirements published in this catalogue, or otherwise brought to their attention.

Students may be separated from the institution whenever in the opinion of the Faculty they are pursuing a course of conduct seriously detrimental to themselves or the University. The University will not tolerate either idleness or dissolute habits.

Athletics.—The following action relative to athletics has been taken by the trustees :

A committee for the regulation of athletic sports shall hereafter be annually appointed and chosen as follows: Three members of the University Faculties and three alumni of the University, these six to be appointed by the executive committee; and also three undergraduates to be chosen during the first week of the College of Liberal Arts year by the Athletic Association.

The committee shall have entire supervision and control of all athletic exercises within and without the precincts of the University, subject to the authority of the Faculty of the College of Liberal Arts.

In accordance with this action, a Committee for the Regulation of Athletic Sports has been created, and has adopted the following regulations, based on the Intercollegiate Conference Rules:

1. No one shall participate in any intercollegiate game or athletic sport unless he be a *bona fide* student, doing full work in a regular or special course, as defined in the curriculum of his college; and no person who has participated in any intercollegiate game as a member of any college team shall be permitted to participate in any game as a member of another college team until he has been a matriculant in such college, under the above conditions, for a period of one year, or has obtained a college academic degree; academy students shall not be eligible to membership on the college teams.

2. No person shall be admitted to any intercollegiate contest who receives any gift, remuneration, or pay for his services on the college team.

3. No student shall play on the teams of any college or colleges for more than four years in the aggregate.

4. No student shall participate in any intercollegiate contest who has ever used or is using his knowledge of athletics or his athletic skill for gain. No person who receives any compensation from the University for services rendered by way of regular instruction shall be allowed to play on any team.

5. No student shall play under an assumed name.

6. No student shall be permitted to participate in any intercollegiate contest who is found by the Faculty to be delinquent in his studies.

7. All intercollegiate games shall be played on grounds either owned by, or under the immediate control of, one or both of the colleges participating in the contest, and all intercollegiate games shall be played under student or college management, and not under the control of any other corporation, association, or private individual.

8. The election of managers and captains in each college shall be subject to the approval of its committee on athletics.

9. College football teams shall play only with teams representing educational institutions.

10. At least ten days before every intercollegiate contest, the respective chairmen of the athletics committee of the institutions concerned shall submit to each other a certified list of players eligible, under the rules adopted, to participate in said contest. It shall be the duty of the captains of the respective teams to exclude from the contest all players save those so certified.

11. Athletic committees shall require each candidate for a team to represent the University in intercollegiate contests to subscribe to a statement that he is eligible under the letter and spirit of the rules adopted.

12. No person having been a member of any college athletic team during any year, and having been in attendance less than *one college half-year*, shall be permitted to play in any intercollegiate contest thereafter until he shall have been in attendance six consecutive calendar months.

13. No schedule of games shall be fixed without the approval of the Committee for the Regulation of Athletic Sports. No additional dates for games shall be accepted without the approval of the chairman of said committee.

14. The selection of players for any team shall be subject to the approval of the Committee for the Regulation of Athletic Sports. And, in order to provide proper information on which to act, every student desiring to play on any team shall fill out a blank prepared by the committee. To this certificate shall be appended a certificate signed by the physical director, attesting the applicant's physical fitness for membership in the team proposed.

15. No students of the departments situated at Evanston, and no member of any University football or baseball team, shall, during term time, without the permission of the Committee for the Regulation of Athletic Sports, play on any like team not connected with the University.

The Committee for the Regulation of Athletic Sports for the current year consists of the following members: Professors Long, White, and J. A. Scott; Messrs. F. B. Dyche, '80; J. F. Oates, '93; A. N. Culver, '94; A. F. Johnson; F. H. Scheiner, and C. E. Dietz.

Musical Clubs.—Student musical organizations, such as glee, banjo, or mandolin clubs, are under the supervision of a Faculty Committee appointed for that purpose. The chairman of the committee is to be informed of the intended organization of any such association, with its proposed plans, purpose, and membership. No formal organization is permitted without the knowledge and sanction of the committee. It is especially necessary that the business managers of such organizations make no final arrangements for public appearances of the clubs without the consent of the committee. Under no circumstances will concert dates be permitted to interfere with examinations, or to interrupt study routine. Students with defective standing are not allowed to be connected with such organizations.

The Committee on Musical Organizations consists of Professors Lutkin, Crook, and Hatfield.

Social Entertainments.—In the interest of the college community the Faculty has adopted the following regulation:

No organization or group of students shall hold in any year more than one party or social entertainment at which both ladies and gentlemen are present. Previous permission must in all cases be obtained from the Committee on Social Affairs. Such parties or entertainments shall close not later than eleven o'clock.

The Committee on Social Affairs consists of Professors Young, Fisk, Lutkin, Atwell, and Dean Crow.

RELIGIOUS WORSHIP.

The charter of the University provides that "no particular religious faith shall be required of those who become students

of this institution." The University was not established with the view of forcing on the attention of students the creed of any particular church, but for the promotion of learning under influences conducive to the formation of a manly Christian character. This continues to be its aim and purpose.

Students are expected to attend public worship on Sunday in the church of their choice.

Chapel service is held at noon of each week day except Saturday. Attendance is required under the following regulations:

1. When a student's record shows an attendance of less than three-fifths of the chapel exercises of any semester, then one semester-hour is added to the requirements for graduation of that student for every three credits needed to make good the deficiency. In applying this rule, a deficiency of only one or two credits is passed over to the next semester. In larger deficiencies, the excess above the highest multiple of three is carried over.

2. When at the close of a semester the chapel record of a student shows a surplus of chapel credits, the surplus credits are applied to cancel any semester-hours which may have been added to the requirements because of defective chapel record of any preceding semester; and the surplus chapel credits not needed to remove such semester-hours are transferred to the chapel record of the following semester.

3. When a student's chapel record shows a deficiency of credits for two distinct semesters which has not been removed by surplus credits in other semesters, he is not permitted to register again until permission is obtained from the Faculty through the Committee on Chapel Attendance by petition.

The Committee on Chapel Attendance consists of Professors Baird, Crook, and Patten.

Christian Associations. A Young Men's Christian Association and a Young Women's Christian Association exist as distinct organizations, and exert a helpful influence upon the religious life of the students. Under the direction of these organizations, religious meetings are held each week, and daily study of the Bible is promoted.

STUDENT ORGANIZATIONS.

Through the agency of voluntary student associations an active interest is maintained in matters which relate to the intellectual and social life of the student community.

Central Debating League. Northwestern University, the University of Michigan, the University of Chicago, and the University of Minnesota compose the Central Debating League. The purpose of this organization is the development of readiness and skill in speech and debate, through the public discussion of leading questions of the day.

The universities named are arranged in two groups for the semi-final debates. The final contest in each year takes place in Chicago on the first Friday in April, at which time the debate is between the winners from the groups.

Through the generosity of Mr. Alexander H. Revell, of Chicago, a prize of fifty dollars is annually awarded to the side winning in the final debate.

Northern Oratorical League.—The oratorical associations of Northwestern University, the University of Michigan, the University of Wisconsin, the University of Iowa, the University of Chicago, and Oberlin College compose the Northern Oratorical League. The purpose of this organization is to promote an interest in public speaking, and to elevate the standard of oratory, by holding annual contests. The contests of the League are open only to undergraduates.

Through the generosity of Mr. Frank O. Lowden, of Chicago, a prize of \$100 is annually awarded to the successful contestant, and one of \$50 to the person winning second place.

Literary and Scientific Societies.—The following societies and clubs meet regularly for purposes of literary culture or for the advancement of knowledge in special fields: Hinman Literary Society, Rogers Debating Club, Adelphic Literary Society, Science Club, Die Deutsche Gesellschaft, Der Deutsche Litteratur Verein, Botanical Club, Zoölogical Journal Club, Mineralogical Journal Club, Coffee Club, History Club. Some of these organizations are composed of members of the Faculty and advanced students, who meet together for the presentation and discussion of the problems pertaining to their special departments.

Other Organizations.—Various other organizations are maintained by the students, including an Athletic Association, Glee, Banjo, and Mandolin Clubs.

THE UNIVERSITY SETTLEMENT.

An association, composed of alumni and friends of the University, maintains at 252 West Chicago Avenue, Chicago, the Northwestern University Settlement. College graduates and others reside in the settlement house, and seek to influence the surrounding com-

munity as members of it. Opportunity is also offered to undergraduates for philanthropic work and practical acquaintance with sociological problems. The plan includes classes for instruction, clubs for social improvement, a reading-room, lectures, concerts, house-to-house visitation, and legal and medical dispensaries. The expenses are met by membership subscriptions and voluntary contributions.

FELLOWSHIPS AND SCHOLARSHIPS.

Fellowships.—The University has maintained during the year 1901-1902 six fellowships.

These fellowships are offered in the departments of Botany, History, Mathematics, Physics, and Zoölogy, for the purpose of encouraging advanced study in the branches named. The period of incumbency is limited to one academic year, which must be spent at this University, and the incumbents are required to give limited assistance in the work of instruction.

The Catherine M. White Scholarships.—The University has received a bequest of nine thousand dollars under the will of Catherine M. White, of Evanston, to establish three scholarships.

The Missionary Scholarships.—The Board of Trustees of the University, in June, 1899, established two scholarships in the College of Liberal Arts, entitling the holders to free tuition. The Northwestern Branch of the Woman's Foreign Missionary Society of the Methodist Episcopal Church may nominate to these scholarships persons intending to enter upon mission work in the foreign field. In making nominations preference is given to students from foreign lands.

The Methodist Episcopal Church Scholarship.—A scholarship yielding annually the interest on one thousand dollars has been founded by the First Methodist Episcopal Church of Evanston, for the benefit of meritorious students.

The Chicago Record-Herald Scholarship.—A scholarship, the gift of the *Chicago Record-Herald*, which affords free tuition and incidental expenses, is each semester awarded by the Faculty.

The Marcy Scholarship in Biology.—A table has been secured

at the Marine Biological Laboratory, Wood's Holl, Massachusetts, for the sole use of advanced students from the biological departments of the College of Liberal Arts. The occupants of this table will be entitled each season to all the privileges of the laboratory, including instruction, lectures, and the use of appliances and apparatus. The appointments to the scholarship will be made in June.

High School Scholarships.—A scholarship giving free tuition for the first year of the college course is granted to each of the high schools in the State of Illinois on the accredited list of the University. The scholarship will be awarded to the graduate of the school who has completed the requirements for admission to college, and who is certified to by the principal of the school as having the most satisfactory record of scholarship in the class. In case the pupil having the highest grade does not avail himself of the scholarship, it may be granted, at the discretion of the University, to the candidate next in rank.

PRIZES.

The following prizes are offered to the students in the College of Liberal Arts who are candidates for a degree. No successful contestant can become a second time a competitor for the same prize. No person will be allowed to compete for any prize against whom, at the time for appointing contestants, unredeemed failures are recorded in more than one department of study.

The Kirk Prize in Oratory.—A prize of one hundred dollars, the gift of Mr. John B. Kirk, of Evanston, will be awarded each year to the member of the graduating class who excels in original oratory. The conditions on which the award will be made are as follows:

1. Five contestants will be appointed by the Faculty, and announcement of the appointments will be made the first Friday in May.
2. These appointments will be made on the basis of the rhetorical work done during the last three years of the undergraduate course—equal weight being given to the following records: (1) English A;

(2) English B; (3) Elocution B; (4) Elocution C; (5) Orations of the year of graduation.

3. At this contest no prompting of the speakers will be allowed, and failure of memory will exclude a competitor from consideration in the assignment of the prize.

4. The award will be made by a committee appointed by the Faculty, but composed of persons who are not members of the Faculty. The decision will be announced at Commencement.

The Patten Prize in Oratory.—Mr. James A. Patten, of Evanston, offers, each year, three prizes of fifty dollars, thirty dollars, and twenty dollars, respectively, to the contestants obtaining the first, second, and third honors in the preliminary contest to determine who shall represent the University in the Northern Oratorical League contest.

The Harris Prize in Political and Social Science.—A prize of one hundred dollars, the gift of Mr. Norman W. Harris, of Chicago, will be awarded to the writer of the best essay on an assigned topic in the department of Economics, Finance, and Administration. The subject for the year 1901-1902 was: "Trusts, or Industrial Combinations in the United States: Their Development, Present Status, and Probable Future." For the year 1902-1903 the subject is: "A Study of Life Insurance."

The conditions on which the Harris prize will be awarded are as follows:

1. No undergraduate student will be allowed to compete for this prize unless he shall have completed at the time of making the award the equivalent of Courses A and C in Political Economy.

2. Essays offered in competition for this prize must contain not less than 10,000 words, and must be either printed or typewritten. If typewritten, they must be on letter paper of a good quality, of the quarto size, with a margin of not less than one inch at the top, at the bottom, and on each side, so that they may be bound without injury to the writing. On the title-page of each essay must be written an assumed name, and under cover with the essay must be sent a sealed letter containing the true name of the writer and superscribed with his assumed name.

3. The copies of all essays submitted for this prize become the property of the college, and the essay receiving the prize shall have indorsed upon it a certificate of that fact.

4. Each year the essays submitted in competition for this prize must be deposited with the Registrar of the Faculty before 12 o'clock noon on May 1st.

5. The Faculty will appoint three judges of the essays offered and the prize shall be awarded to the essay declared by at least two of the judges to be the best; *provided*, that the University expressly reserves the right to make no award of the prize in any year in which the best essay offered shall, in the opinion of a majority of the judges, not be of sufficient merit to deserve a prize.

The Gage Debate Prizes.—Three prizes, of fifty, thirty, and twenty dollars, respectively, are given annually by the Hon. Lyman J. Gage for excellence in debating. The recipients of these prizes are selected through a series of debates, held in the autumn of each year, to which students from all departments of the University are eligible. The three men receiving the highest marks in this series of debates receive the Gage prizes in the order of their markings, and they also become the representatives of the University in the annual contest of the Central Debating League.

The Cleveland Prize in Declamation.—Two prizes of fifty and twenty-five dollars, respectively, the gift of Mr. C. B. Cleveland, of Evanston, will be given to the students who shall excel in declamation.

1. Six candidates will be appointed by the Faculty, the selection being confined to students who have completed not less than fifty hours of college work, Elocution B included.

2. The announcement of the contestants for 1903 will be made on October 1, 1902, and the contest will occur on the evening of February 20, 1903.

3. In the competition, at least one of the prizes must be given for an oratorical effort. In no case may a declamation exceed twelve hundred words.

4. At this contest no prompting of the speakers will be allowed, and a failure of memory will exclude a competitor from consideration in the assignment of the prize.

5. The award will be made by a committee appointed by the Faculty, but composed of persons who are not members of that body.

The American School of Classical Studies at Rome.—The University is a contributor to the support of the American

School of Classical Studies at Rome, and is represented by a member of the faculty on its Board of Managers. The school affords facilities for archæological and classical investigation and study in Rome, and graduates of the College of Liberal Arts are entitled to all its advantages without expense for tuition.

THE GROUNDS AND BUILDINGS.

The Campus has an area of about forty-five acres, and is beautifully situated on the shore of Lake Michigan. University Hall, the Fayerweather Hall of Science, the Dearborn Observatory, Fisk Hall, Memorial Hall, Swift Hall, the Orrington Lunt Library, the Gymnasium, the Old College, and the Dormitory, Heck Hall, are all on the Campus. Willard, Pearsons, and Chapin Halls are distant from it about three minutes' walk.

The University has provided large athletic grounds suitably prepared for use. A grand stand, erected by the alumni and students, furnishes seats for about seven hundred persons. In connection with it are dressing-rooms for the use of athletic teams, together with the necessary baths.

A detailed statement as to the University buildings in Evanston is given below. An account of those which are in Chicago will be found in the portions of the catalogue which relate to the professional schools.

University Hall was erected in 1869. It contains the museums of anthropology, botany, geology, and zoölogy, the botanical and zoölogical laboratories, as well as a large number of lecture and recitation rooms. Adjoining the recitation rooms are the private offices of the professors. Here also is the office of the President of the University.

The Fayerweather Hall of Science, erected in 1886, was the gift of the late Mr. D. B. Fayerweather, of New York City. It is constructed of stone and red pressed brick, with terra-cotta trimmings.

The front is 130 feet, and the depth 60 feet. At the rear are two wings, extending 54 feet, inclosing a court 54 feet square. The whole building is divided into two departments, for chemistry and physics, separated by a fireproof wall reaching from the foundation to the roof. The building is heated with steam, and is thoroughly

ventilated. It has the latest improvements and facilities for instruction in chemistry and physics.

The Dearborn Observatory was erected in 1888-89 through the generosity of Mr. James B. Hobbs, of Chicago. Its length from north to south is 81 feet, and its greatest breadth is 71 feet. It is constructed of stone in the most substantial manner. The building includes a dome for the great Equatorial, a Meridian Circle room, Library, and eight additional rooms for other purposes. The whole is arranged especially for convenience in carrying on astronomical work.

The Orrington Lunt Library Building was erected in 1893-94. Its erection was made possible by a gift from the late Mr. Orrington Lunt, of Evanston, supplemented by the gifts of other generous donors. The appearance of the building, in its proportions and architectural details, is noble and pleasing. The material used is Bedford limestone. The dimensions of the building are 150 by 56 feet. The main floor contains the room for book storage, supplemented by a room in the basement, the reading room, and the offices of administration. On the second floor there is an auditorium of handsome finish, with seating capacity for five hundred persons. On the same floor there is a large lecture-room, and other apartments for class, seminary, or office use. In the third story, which extends over the central section of the building, and in the well-lighted basement, there are rooms used for recitations and also for general University service. The building is heated by steam from a detached station. It is lighted throughout by gas and electricity.

Fisk Hall.—This building was erected in 1898 and dedicated January 28, 1899. It is devoted to the work of the Academy, and is named for Principal Herbert F. Fisk, who has been connected with the Academy since 1873. The building is Romanesque in style, and is a three-story structure of brick and terra-cotta, with stone trimmings and a tile roof. It cost about \$75,000, and was the gift of Mr. William Deering. The building stands at the south end of the Campus and has a frontage of 180 feet on Sheridan road. The heating, lighting, and ventilating appointments of the building are as perfect as science can make them. Both gas and electricity are used in lighting. The woodwork throughout is of quartered oak.

The Annie May Swift Hall.—This building was erected during the years 1894-95, for the work in elocution and oratory. The style of architecture is Venetian. The lower part of the building is of rock-faced Lemont limestone, and the upper stories of buff-colored Roman brick and terra-cotta. The floor is of red tile. The building is heated by steam and lighted by both gas and electricity. It is named in memory of a deceased daughter of Mr. Gustavus F. Swift of Chicago, one of the trustees of the University, and the largest contribu-

tor for the erection of the building. On the first floor are an auditorium, reading, and reception rooms. The second story is divided into fifteen rooms for private instruction. The floors and partitions are deadened by an improved system of construction.

Music Hall is situated immediately north of Woman's Hall, a short distance west of the Campus. It is designed as a home for the School of Music, and was completed in time for occupancy during the spring term, 1897. It is substantially built of stone and brick, surmounted with a tile roof and finished in Georgia pine. The first floor is divided into fourteen teaching and practice rooms, including an office. The second floor contains three additional class-rooms and a well-arranged concert-hall, seating over three hundred. The hall is provided with a large stage, dressing-rooms, a grand piano, and a two-manual pipe-organ with pedals.

Old College.—This building, the first to be erected by the University, originally stood on the corner of Hinman Avenue and Davis Street. For many years it was the only building which the University used for educational purposes. The building was moved to the Campus, in 1871, and was enlarged for the use of the Academy. In 1899, it was moved from the site west of Fisk Hall and fronting the Sheridan road, to its present position south of the gymnasium and to the rear of Fisk Hall. It has been refitted and is used at present for general University purposes.

Gymnasium.—This is a well-lighted, two-story brick building. The basement contains dressing-room, lockers, baths, and a place for ball-throwing. The exercising-room is 40 by 80 feet, with a height of ceiling of 20 feet, unobstructed by pillars, leaving considerable space for the practice of indoor athletics. It is supplied with light and heavy apparatus for general gymnastic and athletic exercise, together with such appliances as are necessary for the development of a symmetrical body. The director's office is on the main floor, and contains appliances for making physical examinations. The entire building is lighted by electricity.

The Dormitory, erected in 1890, is designed to accommodate a limited number of young men, at a moderate charge for rent. The rooms are, for the most part, in suites, consisting of a study and two well-lighted bedrooms with wardrobes.

Willard Hall is a large edifice of pleasing architecture. It accommodates 135 students, contains a chapel and other public rooms, but is chiefly devoted to private apartments for young women. Many of the rooms are in suites. They are of good size, well lighted and ventilated, and are cheerful and attractive. The building is provided with fire escapes, and is heated by hot water.

Pearsons and Chapin Halls are convenient and well-furnished

homes, constructed of pressed brick and stone. Each affords accommodations for about fifty young women.

Memorial Hall, a handsome structure of pressed brick, was erected for the Garrett Biblical Institute, and dedicated in May, 1887. The most attractive part of the interior, is the chapel, which has seating capacity for about five hundred. The windows are adorned with elaborate designs in rich cathedral glass. The designs are in harmony with the idea of the "Memorial Hall," being in memory of deceased professors of the Institute, and of others well known for interest in theological studies.

Heck Hall, the dormitory of the theological students, was dedicated in July, 1867. It is a brick building, and is five stories in height. It is heated by steam and lighted by electricity.

THE LIBRARIES.

The Library of the College of Liberal Arts is in a commodious library building, described on page 149. During the college year the library hours are from 8 to 12 A.M., from 1 to 6 P.M., and from 7 to 9 P.M. All officers and students of the University may draw books for home use. Persons not connected with the University, who desire to use the library for purposes of study, and who are responsibly introduced, may be allowed library privileges. The library contains 48,675 bound volumes, and about 32,500 unbound pamphlets.

It is classified in two sections, the General Library and the Greenleaf Library. The General Library, numbering 37,429 volumes, is designed to supply books appropriate to the several departments of study in the University, and also to furnish students with works of general reading and reference. The reading-room is provided with a large selection of periodicals, complete sets of many of which are placed on the shelves for reference.

The Greenleaf Library, the gift of the late Luther L. Greenleaf, Esq., contains 11,246 volumes, also a large and valuable collection of unbound dissertations and monographs, chiefly publications of foreign universities and learned societies. It is unusually complete in the Greek and Latin classics, every author being represented by the best editions from the earliest to a recent date. It contains also a choice selection of standard works in German and other modern languages. In the subjects of history, philosophy, theology, and the fine arts, there are many works of unique value.

The Schneider collection, lately added to the German section of the library through the generosity of friends of the University,

numbers 2,500 volumes. It includes many first editions of standard authors. Among its rarities are original prints from the period of the Reformation, and a large collection of annuals (*Musen-almanache* and *Taschenbücher*) of the eighteenth and nineteenth centuries.

The Orrington Lunt Library Fund, the gift of the gentleman whose name it bears, is set apart as an endowment for the purchase of books. The fund promises, as it becomes productive, to give the library large and permanent growth.

On payment of the regular term bills, every student is entitled to the privileges of the library.

Students of the University have the use of the library of the Garrett Biblical Institute, numbering 13,650 bound volumes. They have access also to the Evanston Public Library and to the great libraries of Chicago—the Chicago Public Library, the Newberry Library, the John Crerar Library, and the Library of the Chicago Historical Society.

THE ASTRONOMICAL OBSERVATORY.

The Observatory is provided with a substantial building (see page 148), the gift of James B. Hobbs, Esq., of Chicago. It is known as the Dearborn Observatory, a name given it before it was removed from Chicago to Evanston. Its objects are to make original researches in astronomical science, to assist in the application of astronomy to geography, to communicate exact time, and to furnish instruction in astronomy to the students of the University, both those in the regular course and those who give special attention to the study.

The Observatory is open to visitors on Thursday evening of each week. Visitors may also be admitted at other times by making special arrangements with the President of the University or the Director of the Observatory.

The principal instruments of the Observatory are :

1. The great equatorial refracting telescope, made by Alvan Clark & Sons, of Cambridge, Massachusetts, in 1861. The telescope is fitted with driving clock, micrometer, and other appliances necessary for first-class work. The dimensions of the Equatorial are:

Diameter of declination circle, 30 inches; reading by vernier to five minutes, and by two microscopes to ten seconds of arc.

Diameter of hour circle, 22 inches; reading by vernier to single minutes, and by microscopes to single seconds of time.

Focal length of telescope, 23 feet.

Aperture of object glass, 18½ inches.

2. A meridian circle of the first class, constructed in 1867, by Messrs. A. Repsold & Sons, of Hamburg. This instrument has an object glass of six French inches aperture, and a divided circle of forty inches diameter, reading by four microscopes. In plan of construction it is like Bessel's celebrated Königsberg circle by the same makers, but has some recent improvements in the mode of illuminating the field of view, together with apparatus for registering declinations. Hough's printing and recording chronographs are used for recording meridian observations and other phenomena.

The Observatory has a chronometer (William Bond & Son, No. 279), three mercurial pendulum clocks, and an astronomical library containing about thirteen hundred volumes and pamphlets.

THE MUSEUMS.

The Museums of the College of Liberal Arts contain collections illustrative of anthropology, art, botany, geology, mineralogy, and zoölogy.

The collections relating to anthropology, botany, geology, and zoölogy are at present contained in University Hall. The art collection is in the Orrington Lunt Library. The mineralogical collection is in the Fayerweather Hall of Science.

The following descriptions indicate the character of the collections:

MUSEUM OF ANTHROPOLOGY.

This comprises mainly collections in aboriginal archæology. Primitive ceramic art in this country is well represented by several hundred specimens from the mounds of Illinois, Wisconsin, Kentucky, and Missouri.

Primitive work in stone and copper is represented by large collections from various parts of the United States and from England. The Museum contains more than 7,000 specimens neatly arranged in cases in a department by themselves. During the year 1900, an important collection of material from the cliff-dwellings and the pueblas of New Mexico was added to the Museum.

MUSEUM OF ART.

A large room in the Orrington Lunt Building has been handsomely fitted up by the University Guild for an art collection which

the Guild has collected for the University. The Guild is an organization of two hundred women, who seek to secure for the University valuable works of art. The collection already secured is valued at several thousand dollars.

The Art Museum is open to the public on Wednesday afternoons

MUSEUM OF BOTANY.

The college herbarium is made up of gifts received from friends of the college and of collections made by students and instructors. It now contains about five thousand species. It includes collections made by Kennicott from the Red River of the North; by Vasey from the Rocky Mountains; by Thomas and Bentley from Southern Illinois; by Mrs. Kidder from Brazil; collections from New England, and New York, the Lake Superior region, and Cook County, Illinois.

The Henry H. Babcock herbarium, donated in 1887, by Mrs. Mary Keyes Babcock, of Kenilworth, is systematically arranged, handsomely provided with substantial cases, and contains ten thousand species from all quarters of the globe.

MUSEUM OF GEOLOGY.

This museum contains typical rocks from this country and from Europe. They exhibit the variations in structure and texture of the large groups of sedimentary, crystalline (metamorphic), and igneous rocks. They also show the rock formations in the geological column from the more ancient to the recent rocks.

The series of fossils, both of plants and of animals, are quite extensive, containing characteristic fossils of the different geologic periods. The collections which are especially valuable are: 1, Cretaceous and Tertiary fossils, the gift of the Smithsonian Institution; 2, Fossils and rocks from Illinois Geological Survey; 3, Niagara fossils from Chicago and Racine, some of which are type specimens; 4, Illinois Carboniferous flora, largely from Grundy County; 5, Miscellaneous, containing valuable specimens from many parts of the world. In addition, the museum contains casts, models, charts, photographs, lantern slides, and maps. Taken as a whole, this museum illustrates the natural history of the crust of the earth.

The museums of geology and mineralogy contain 21,000 specimens.

MUSEUM OF MINERALOGY AND LITHOLOGY.

The Mineralogical Museum contains specimens of most of the mineral species in such numbers as to well illustrate their characteristics and occurrence.

Besides those specimens which have been accumulating to the museum for several years, are to be mentioned the Ayers loan-collection; additions from the Columbian Exposition, consisting chiefly

of mass specimens and illustrations of economic ores; the Tyler collection, containing many crystals, notably good calcites; and a fine collection of azurites and malachites. Owing to want of space and cases, the museum is partly in University Hall and partly in Science Hall.

In the Lithological section are several hundred rock specimens from different parts of this country and from Europe.

MUSEUM OF ZOÖLOGY.

This museum contains (1) all (with few exceptions) the mammals, birds, reptiles, and batrachians indigenous to Illinois; (2) all the mammals and birds of the New South Wales exhibit at the Columbian Exposition. The kangaroos and lemurs, the platypus and the echidna, the emu and the cassowary, the rifle-bird, the regent and the lyre bird, and the apteryx from New Zealand, in all 450 specimens, make a very complete presentation of that strange fauna; (3) a series of birds and a series of corals from the Philippine Islands (it is thought that the species of cuckoos and parrots are complete for the locality); (4) a series of skeletons, mostly prepared by Ward, including the elephant, the whale, the American crocodile, and skeletons of birds and fishes; (5) miscellaneous (among the larger animals are the moose, the buffalo, the Virginia deer, the white bear, and the reindeer). There are birds from India, Central America, Brazil, British Guiana, Norway, and Russia. There is a collection of fifteen thousand marine and fresh-water shells. There is a large collection of fishes donated by the Smithsonian Institution; also fishes from Lake Michigan, prepared by Dr. Phillips. There are crustaceans, echinoderms, sponges, and a multitude of low forms of marine life, many of them collected by Prof. Wm. N. Rice of Middletown, Connecticut. This museum contains 30,000 specimens.

CHICAGO ACADEMY OF SCIENCES.

The extensive collections of the Chicago Academy of Sciences are accessible to all students of the University.

THE LABORATORIES.

In the several laboratories of the College of Liberal Arts opportunities are provided for practical instruction in botany, chemistry, geology, mineralogy, physics, psychology, and zoölogy.

BOTANICAL LABORATORY.

Provision is made for conducting the work of the botanical courses in four rooms on the third floor of University Hall.

Tables, compound and dissecting microscopes, glassware, reagents and lockers are provided for each student. Microtomes, incubators, and sterilizing apparatus are provided for the advanced courses. For the work in vegetable physiology material is obtained from neighboring greenhouses.

CHEMICAL LABORATORIES.

The accommodations of the Chemical Department in Science Hall include, on the main floor, a lecture-room, seating sixty; a reading-room; a laboratory for general chemistry and qualitative analysis, with forty-six tables; a laboratory for quantitative analysis, with twelve tables; a balance-room, the professor's office and private laboratory, and an assistant's room; in the basement, a general store-room, and a room with four tables equipped with special conveniences for water analysis.

GEOLOGICAL LABORATORY.

The Geological Laboratory is in University Hall and contains: (1) working tables for students, (2) study collections of typical rocks, minerals and fossils, (3) photographs and geological maps, (4) a geological library, (5) topographical models, (6) a large number of topographic maps, (7) petrographical microscopes, (8) thin sections of rocks and minerals. In addition to the above is a collection, belonging to the Wisconsin Geological and Natural History Survey, of over 1,100 specimens from the copper-bearing rocks of the Lake Superior district, and the private rock collection and geological library of the Professor of Geology, all of which are open to students. The Geological Museum is on the floor above, and its specimens are also available for study and comparison.

MINERALOGICAL LABORATORY.

In the basement of Science Hall is situated the Mineralogical Laboratory, which contains models, glass and wooden, and goniometers for the study of crystallography; a large collection of minerals, an economic collection, blowpipe materials, rock-cutting machines, and petrographical microscopes, for students' use in mineralogy and petrology.

PHYSICAL LABORATORY.

The Department of Physics occupies fourteen rooms in Science Hall, excellently adapted to their purposes. It is fairly well equipped with modern instruments, especially in the departments of acoustics, electricity, and light.

Among rooms for special purposes may be mentioned a workshop in the basement, a room for work in spectroscopy, fitted with a curved grating, a room for dyeing and developing photographic

plates, rooms for electric and magnetic work, a room for general optics, a photometric-room, and several small rooms for individual work. In the court of Science Hall is a power-house with an outfit of two engines, three dynamos and a large storage battery. These furnish power to the Observatory and Physical Laboratory. This building is also equipped with a machine shop, a drawing room, and a wood-working shop to furnish shop practice for students who are preparing to be engineers. The machine shop is provided with lathes, drill press, sharper, etc.

PSYCHOLOGICAL LABORATORY.

The laboratory for experimental psychology, founded in 1900, has quarters in Old College, consisting of a general laboratory and apparatus room, dark room, research rooms, and an office and reading room. The reading room is supplied with the most useful books and periodicals on experimental psychology. The equipment includes everything necessary for purposes of demonstration in the course in general psychology (A), also for an elementary laboratory course, and for a few typical researches. Additions are made from time to time, as the work demands. Among the pieces already purchased are the following: kymograph, sphygmograph, pneumograph, cardiograph, dynamometer and dynamograph combined, tambours, Harvard trip balance, triple beam balance, Harvard ergograph, pseudoptics, kinoscope, reaction timer, stop watch, metronome, rotator, apparatus for judging distance, material for studying illusions, olfactometer, chemical thermometer, material for studying sensations of color and sound, algometer, æsthesiometer, touch-weights, models of brain, eye and ear, dissecting and other tools.

ZOOLOGICAL LABORATORY.

The work-rooms of the Department of Zoölogy comprise a large general laboratory, a laboratory for vertebrate zoölogy, a seminary room, which is also used as a department library, and a preparator's room. The equipment consists of thirty-six excellent compound microscopes, several microtomes of the most recent make, dissecting microscopes and instruments, incubators, aquaria, glassware, reagents, and other apparatus necessary for elementary and advanced work in Zoölogy. The department is also supplied with a full set of Leuckart's Zoölogical charts and several sets of Ziegler's wax models. The library facilities for work in Zoölogy have been increased by the addition of several important biological periodicals and by the purchase of a large number of books and monographs.

THE GYMNASIUM.

The gymnasium is under the immediate supervision of a competent director, who gives his entire time to the class and individual instruction of students of both sexes. It is open every week day from 10 A.M. till 6 P.M., with the exception of Saturdays, when it closes at 3 P.M. Each student, upon entering the gymnasium, may, if he so desires, be measured and thoroughly examined physically; his health, strength, muscular development, physical defects, etc., will be carefully noted. From these data a special course of exercises, based on scientific principles, will be prescribed to meet his individual needs.

It is the purpose of the director of this department to offer to each student such advice and prescribe such exercises as will give increased health, strength, and symmetry of body.

THE FEES AND EXPENSES.

Matriculation Fee. Every student, before entering the College of Liberal Arts, is required to pay a matriculation fee of five dollars. This fee is paid but once.

Semester Fees. An undergraduate student is required to pay a fee of thirty-five dollars at the beginning of each semester, of which amount twelve dollars is for incidentals and the remainder for tuition. The sons and daughters of ministers as well as students who are preparing for the Christian ministry, and are properly recommended, pay eighteen dollars a semester.

Students pursuing a single study pay a fee of eighteen dollars a semester, except those who are preparing for the ministry, or who are the children of ministers; in the case of these the fee is twelve dollars a semester.

A graduate student in residence is required to pay fifteen dollars a semester. If not in residence, he pays a fee of ten dollars at the time of registration, and on the presentation of his thesis, preparatory to his final examination, an additional fee of twenty dollars.

Laboratory Expenses. Students who pursue laboratory courses are required to pay for the materials and apparatus actually consumed. To this end, the students are required to make a deposit at the beginning of each semester for materials and for the use and breakage of apparatus. Unexpended balances are returned. The deposits vary for the different courses. In the Chemical laboratory, for Course A the deposit is \$7.50 a semester, while for Courses B, C, or D, it is \$9.00 a semester. In the Zoölogical laboratory, the deposit required is \$5.00 a semester. In the Mineralogical laboratory, a fee of \$3.00 will be charged for Course A in the second semester, Course E (assaying) \$5.00 a semester. These deposits are required alike of graduate and undergraduate students.

Diploma Fee. The diploma fee is \$10.00 for all degrees granted by the College of Liberal Arts.

Board and Lodging. Students living in Willard Hall pay according to the desirability of the room, from \$99.00 to \$108.00 each semester. Students in Pearsons and Chapin Halls pay for room and board \$50.00 each semester, payment to be made in quarterly installments at the beginning and at the middle of each semester. A deposit of five dollars is required when a room is reserved. The prices given for Willard, Pearsons, and Chapin Halls include a furnished room, light, fuel, and the washing of twelve plain pieces. The occupants of the rooms furnish their own bedclothing, pillows, and towels. Room and board bills are payable strictly in advance. No deduction is made for absence in any part of the term, except in cases of protracted illness. The University does not undertake to provide dormitories for the young men, but they may obtain board and lodging in private families at reasonable rates. Clubs are also formed in which the cost of board is reduced to a minimum.

The following table exhibits the scale of annual expenditure:

	Low.	Average.	Liberal.
Tuition and incidental fees-----	\$ 70	\$ 70	\$ 70
Board (36 weeks)-----	90	135	162
Room-----	32	72	100
Washing-----	18	25	35
Text-books and stationery-----	10	18	35
	<u>\$220</u>	<u>\$320</u>	<u>\$402</u>

Payment of Bills.—The payment of fees is made at the University Business Office, 518 Davis street, Evanston. Students who are unable to pay in advance must call at the business office and state their cases. The President and Treasurer will, as a committee, consider and decide on the applications.

No tuition or incidental fees will be refunded except in case of sickness. In this event, if the student will procure from the President an excuse from attendance, and also from a physician a certificate of inability to remain in attendance, half of the amount paid will be refunded, if application is made before the middle of the semester.

LOAN FUNDS.

The University receives annually a considerable sum of money to be loaned without interest to necessitous and deserving students who are preparing for the ministry, or for other forms of Christian work. Loans from this fund are available to students without distinction of sex.

A Woman's Loan Fund, contributed by interested friends and guarded with prudent restrictions, frequently enables the Woman's Educational Aid Association to be of special service to students in advanced classes, who, without timely aid, would be obliged to leave college before finishing a chosen course of study. The valuable assistance already rendered by the fund should commend it to friends of the University who may be able to increase it by donation or bequest. For further information on the subject, address Mrs. Joseph L. Morse, Chairman of the Loan Fund Committee, No. 615 Church street, Evanston.

SELF-SUPPORT OF STUDENTS.

Numerous inquiries are addressed to the authorities of the University by persons, desirous of carrying on collegiate studies, who are without adequate funds to enable them to defray their expenses, asking whether the institution furnishes to students means of employment which will enable them to support themselves wholly or in part while engaged in the prosecution of their studies. It is proper to say that the University does not undertake to furnish employment to any student, and it does not encourage students to matriculate who are entirely without resources. It happens each year that not a few students are able to aid themselves very materially by their labor while carrying on their studies, but the student is obliged to rely on his ability, industry, and economy in all such cases. The Young Men's Christian Association conducts an employment bureau which is of great assistance in securing work for those desiring it.

For further information in regard to the College of Liberal Arts, address the Dean of the College, Evanston, Ill.

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V.—DENTAL SCHOOL, Chicago.

Offers a three years' course leading to the degree of Doctor of Dental Surgery. The facilities for practical and theoretical instruction are unusually good. The new location is particularly well adapted for the convenience of the students and instructors. The attendance during the last year was 535. It is the largest University dental school in the world.

For further information, address **Northwestern University Dental School, Northwestern University Building, cor. Lake and Dearborn Streets, Chicago.**

V.—SCHOOL OF MUSIC, College Campus, Evanston.

Offers extensive courses in the practical and theoretical study of music, and is designed to prepare students for the profession as composers, theorists, artists, teachers, or critics. It also makes provision for the study of music as a part of general culture or as an accomplishment. It offers three years' and four years' courses leading to an appropriate degree in Music.

For further information, address **School of Music, Evanston, Ill.**

VII.—SCHOOLS OF THEOLOGY, Evanston.

The Garrett Biblical Institute, open to all young men from any evangelical church, who are properly recommended as candidates for the Christian ministry, offers a three years' course, arranged for classical graduates of approved colleges, leading to the degree of Bachelor of Divinity; also a four years' course, open to college graduates, leading to the degree of Doctor of Philosophy.

The Norwegian-Danish Theological Department, established to prepare men for the ministry among the Norwegian and Danish people, offers its students an opportunity to pursue their theological studies in the English and Danish languages.

The Swedish Theological Seminary, organized to meet the increasing demands for educated pastors and missionaries among the Swedish population in the United States, offers a four years' course in Divinity.

For further information, address the respective schools, **Evanston, Ill.**

VIII.—ACADEMY, College Campus, Evanston.

Offers a large variety of courses preparatory to college and practical life. The proximity of the college department, with its many facilities, constitutes a great advantage to the Academy. Young men and women will find here opportunity to prepare for any college in the country.

For further information, address **Northwestern University Academy, Evanston, Ill.**

A second academy, under the name of Grand Prairie Seminary, is maintained by the University at Onarga, Illinois. Special facilities are afforded for preparing for college or technical schools, or other higher institutions of learning. The location in a small town makes it possible for the authorities to offer low rates of tuition and board. An excellent commercial course is also offered in this institution.

For further information, address **Grand Prairie Seminary, Onarga, Ill.**

IX.—SCHOOL OF ORATORY, College Campus, Evanston.

Offers instruction in Oratory and auxiliary subjects.

For further information, address **Robert M. Cumnock, Director School of Oratory, Evanston, Ill.**

PRIVILEGES ACCORDED TO WOMEN.

Women are admitted to all departments of the University, except the Medical School, on substantially the same terms as men.

For special information as to the Residence Halls for Women, address **Dean of Women, Willard Hall, Evanston, Ill.**



THE UNIVERSITY BULLETIN IS ISSUED QUARTERLY
BY THE NORTHWESTERN UNIVERSITY

Entered as Second-Class Matter at the Post-Office
at Evanston, Illinois